

January 24, 1964

ED 11-1

Mr. L. J. Berman, Project Engineer  
The H. K. Ferguson Company  
120 Montgomery Street  
San Francisco, California 94104

Dear Sir:

**DRAINAGE PROBLEMS - PORTLAND PLANT**

During a discussion with George Merz this week, we learned that recent heavy rains in the Portland area have created quite a serious drainage problem on our Portland plant property. I understand that Tom Brewer has reported this problem to you and has sent you some pictures showing the extent of erosion.

Erosion seems to be particularly serious at the river end of the south drainage ditch where a large volume of dirt has been washed into the river. It appears that some sort of a concrete spillway may be needed at this location to correct the condition.

It has also been reported that there are other areas in the plant that do not drain because there is no access to the open drainage ditches along the borders of the property. It was also mentioned that we are getting considerable drainage from the property east of our site which washes across the roadway and eventually into our south drainage ditch. Mr. Merz indicated that Bob Dow, Chief Engineer for the Port of Portland, had suggested that something might be done in the way of drainage ditches east of the roadway to divert water around our property.

I would appreciate your comments on this problem and any suggestions you may have as to how it can be solved.

Yours very truly,

ALJR:TM

cc: Mr. George Merz  
Mr. W. H. Weiss

December 10, 1964

File 6-6

Mr. R. M. Cox  
Vice President  
Kansas City, Missouri

Dear Sir:

LIME DISPOSAL

X

We had a visit yesterday from two representatives of the State Department of Health in response to a complaint by a resident of Sauvies Island regarding our dumping lime in the river.

As you know, we have been expecting to hear from these people sooner or later, so we were not surprised.

I showed them the extent of the dumping, and tried to point out the advantages as far as helping to raise the p.H. of the river, counteracting the effect of the effluent from the paper mills, and the fact that our dumped material is completely soluble in the water and does no harm. They were quite understanding, and we feel that they will not pursue the thing too much further.

Off the record, one of the things they did say was that they thought we would be more acceptable as neighbors if we would provide a shield from the water side so anyone on the island could not have a direct view of our dumping operation. We believe that we can accomplish this by abandoning the road we have built paralleling the north fence line and build a new road which will allow us to dump behind the caissons. We will have the same advantages, without the problem of being seen so well from the riverside.

I talked to Andy about the possibility of putting in a basin of steel or concrete which will hold at least five yards of quicklime in which we could install water jets and wash the material to the river through a pipe, rather than requiring the front end loader to actually drive clear down to the water edge. It is his opinion that we could run into difficulties with getting the lime putty to wash to the river, and we certainly agree. Hence, we believe the best solution at least at the present is to provide this new road which we can do relatively inexpensively, using our own equipment with few loads of purchased rock being the only cost.

We will keep you informed as we hear from the Department of Health, who are going to check the matter out with their biologists to assured that we are not contaminating the river.

Yours very truly,

GKM:PAO

NB13

## ASH GROVE LIME &amp; PORTLAND CEMENT CO. 6-6

SPRINGFIELD, MISSOURI

March 12, 1965

FILE

Mr. George K. Merz  
Superintendent  
Portland, Oregon

Dear Sir:

WASTE LIME DUST DISPOSAL

Enclosed is the material that has been worked up for the Portland Plant for the waste material disposal. A method is definitely required. Feeding it into the river will be of benefit to the water way, although it is only a very small amount. It is planned to feed 5 cu. yds. into the river in a minimum time of 10 minutes to a maximum of 30 minutes.

Please carefully review the enclosed material and I would appreciate it if you would return a copy of the enclosed questionnaire with brief answers and a marked up copy of the drawings with any comments. These are still in the rough stages, but together we can probably develop the best reasonable solution.

The selected method will be fully detailed as soon as possible and sent to Kansas City for their approval. Thanks.

Yours very truly,

*Warren H. Weisz*  
Warren H. Weisz,  
Gen. Plant Engineer

WHW:EL  
Enclosure  
cc: P. S.  
cc: A. L., Jr.

## Ash Grove Lime &amp; Portland Cement Co.

Portland, Oregon

March 30, 1965

6-6

Mr. Warren Weisz  
General Plant Engineer  
Springfield, Missouri

WASTE DISPOSAL

Dear Sir:

Many thanks for the great amount of thought and work that you have done in preparing suggested methods for disposal of our quicklime fines, and of our bag dust collector dust.

We too have given the matter a great deal of thought, and in looking over your drawings, it appears that one of the main difficulties with any of these methods would be that many times we would be dealing with a paste-like material which would not be free flowing. In addition, we all know that the Board of Health could change their mind at any time and ask us to cease disposing of this material in the river. This would mean a complete loss of our investment.

We have been in touch with the City Engineer and with the Superintendent of the City Dump, which is located approximately one and one half miles from our plant. They feel that the material would be too dusty to dispose of on their dump, inasmuch as they pushed the material around with their bulldozers. They have given us permission to dump one truck-load and see just how it might work out, so we intend to rent a dump-truck with a canvas cover and try this method. In addition, we have again been in touch with Bob Dow, Chief Engineer for the Port of Portland, and received his tentative permission to dump more material on their various property in this area, provided that it is well tilled into the soil.

We believe that we can prepare a drag which would level the material dumped by the hough to a depth of approximately 2", followed by a disk which would till the lime into the soil to a depth of 8" to 10", and followed by a simple harrow, which would again level the soil. The harrow teeth are available to us without charge, and could be installed in a heavy board. We can obtain a used 8ft. disk for a very few dollars, and in discussing it with someone with a good background of farming, we find that he believes that this will be a good, simple, and effective method. Hence, we are investigating the cost of a used disk to be used for this purpose.

Again, thanks for your good work, Warren, and we will certainly keep you informed of developments in this situation.

Yours truly,

GKM/cf  
cc: A. Lundteigen, Jr. ✓



## ASH GROVE LIME &amp; PORTLAND CEMENT CO.

PORTLAND, OREGON

April 19, 1966

FILE 6-6

Mr. A. Lundteigen, Jr.  
Vice President  
Kansas City, Missouri

WASTE LIME DISPOSAL

X

Dear Sir:

We have looked at our continuing problem of disposal of waste fines from the dust collectors and hydration mill many times since Warren Weisz sent us the group of proposals in March of 1965.

We have had hopes that a market would develop and relieve us of the problem, but to date none has been sold, and the waste pile is getting out of hand. We have discussed the matter with the city's disposal people at the nearby dump, and they won't take it. The Port of Portland has been advised of its benefits in soil stabilization in the hope they would use it in their new construction. All this to no avail.

As you will recall, the state river pollution people gave us verbal "approval" last spring to continue dumping in the river, suggesting that we shield the operation from our Sauvie's Island neighbors view to prevent complaints.

We have considered nearly everything in the book, but haven't come up with anything better or cheaper than Warren's Method I, shown on his Drawing P150X dated March, 1965. The main objection we've had to this method was that a good deal of the present waste pile is wet and wouldn't flow. We now are to the point where we think we must leave the sticky portion of the present waste pile as is and merely dump all future waste as it develops (when still dry).

Warren's hopper in Method I could be deepened somewhat -- say to nine or ten feet from the deck to the lip, thus decreasing the number of gates required and the length of the screw.

## ASH GROVE LIME &amp; PORTLAND CEMENT CO.

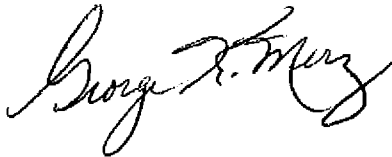
SF NO. 2

TO Mr. A. Lundteigen, Jr.

Also, it would probably be better to have a chute from the conveyor discharge down at an angle for several feet so any build up under the discharge pipe would be further from the causeway and more easily accessible to the clam bucket. The leads on the clam bucket at this time are not long enough to clean out under any pipe. When these wear out, we would replace them with longer ones.

Warren in his discussion accompanying the prints, suggested that he would detail the plan if and when we all agreed to a method. As stated earlier, we must do something, and this method would serve the purpose. Warren estimated the cost at \$4000. We hate to spend that amount of money on an item which only eliminates a nuisance, but see no alternative.

Yours truly,



GKM:LIG

cc: Mr. R. E. Willis  
Mr. Warren Weisz

## ASH GROVE LIME &amp; PORTLAND CEMENT CO.

SPRINGFIELD, MISSOURI

April 21, 1966

FILE

405/23

Mr. Andy Lundteigen  
Vice President  
Kansas City, Missouri

Dear Sir:

PORTLAND WASTE LIME DISPOSAL

I have a few comments in reference to Mr. Merz's letter to you dated April 19, 1966.

In order to eliminate the main objection to Method 1 on drawing P150X dated March 1965 as referred to in paragraph 4, "that a good deal of the present waste pile is wet and wouldn't flow" and "must leave the sticky portion of the present waste pile as is and merely dump all future waste as it develops (when still dry)" it is or would be only necessary to wash this wet sticky material through the hopper with the present fire hose arrangement on the dock. This would require a man present to wash it through, but it can be done at a controlled rate. Over a period of time all the waste pile could be disposed of through this system.

In paragraph 5, reference to making the hopper deeper 9 or 10 ft. and then decreasing the number of gates required and the length of the screw." The hopper as designed is portable, and the Hough was being considered to position the hopper. The larger the hopper is the more difficult it will be to handle and position. The maximum dumping clearance on the Hough is 10'-7" (See dwg. P-151) The weight of the hopper would be increased and the center of gravity raised, which would require a wider base or some reinforcing to accept the dumped in load force. The number of gates should help give good control. Two perhaps are used during the discharge operation, the end ones and center one used to clean out the bin dead spots. The vertical ends are a little easier to design and lay out for intersecting with the screw conveyor.

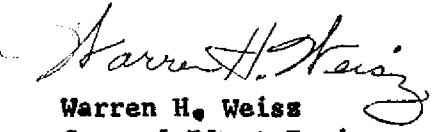
As for the length of the screw it was designed to use one regular standard length screw section to avoid a special length.

Reference to 1st paragraph, Page 2, for moving the chute further out from the causeway for better access by clam bucket. This can be done if desired. I kept it inside so as to be somewhat less noticable and perhaps it would appear as a brace for the causeway. When the leads are replaced on the clam bucket it would be well to replace them with longer ones as suggested. If the present leads are long enough to reach slightly below low water level this should be adequate for a long period of time of normal operation, and can be used to stir residue up to keep the pile from showing. The sand dust from the kiln, if carbonate, may not flow down the river the hydrate and milk of lime solution should flow on out.

Mr. A. L., Jr.  
Kansas City, Missouri

I also believe method 1 would be the cheapest method to dispose of the waste. There are perhaps some changes that should be considered or would be made in the final design.

Yours very truly,

  
Warren H. Weiss  
General Plant Engineer

cc: Mr. George Merz, Portland Oregon  
Mr. Richard E. Willis, Kansas City, Missouri

## ASH GROVE LIME &amp; PORTLAND CEMENT CO.

PORTLAND, OREGON

June 27, 1966

FILE 6-6

REU  
AZ

Mr. A. Lundteigen, Jr.  
Vice President  
Kansas City, Missouri

Dear Sir:

WASTE LIME DISPOSAL HOPPER

X

Attached find pencil drawings of the proposed removable pan for waste disposal. This could be placed on the dock next to the crane and the waste dumped into it with the front end loader, then either the clam shell could be used or the container itself could be hoisted with the crane and dumped in the river. The dumping of this container could be accomplished by using one of the other lines from the crane as a dump line.

We would still be very much interested in trying to use the shore mounted hopper in another location to feed the waste to the river, somewhat in the manner discussed with Mr. Willis. This would do away with the time it takes for a man to operate the crane and would also keep the front loader from the dock with a load and the spilling of waste lime on the wooden dock area.

We have received some prints from Warren Weisz on foundations and placement of this hopper. The print #P-152 looks fine for foundation and support; however, we would be interested in setting this hopper up temporarily and trying it to be sure this is the right approach before we go to the expense of foundations and all.

We will be very interested in your thoughts on this subject.

Yours truly,

W. A. Kuster

WAK:LIG

cc: R. E. W.

Attachments



# Transco Northwest, Inc.

CONVEYING AND RUBBER SPECIALISTS

1301 N. W. 12TH AVE.

PORTLAND, OREGON 97209

PHONE 226-3861

SEATTLE OFFICE: 7440 PERIMETER ROAD SO.

SEATTLE, WN. 98108

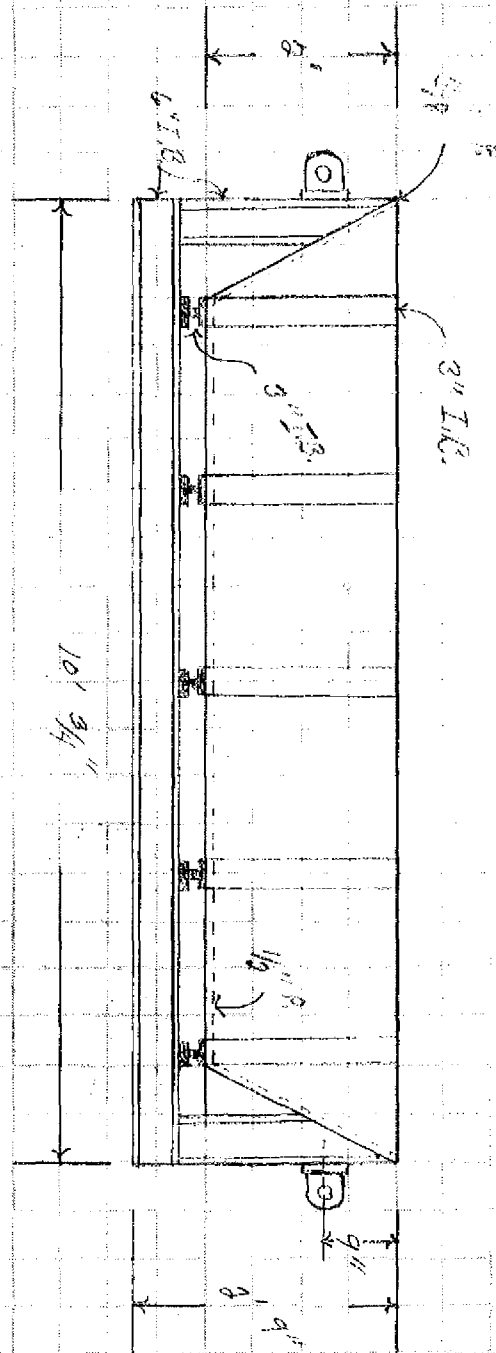
PH. 722-0655

DISTRIBUTORS FOR:  
EXTREMULTUS  
LINK-BELT  
U.S. RUBBER  
WESTINGHOUSE ELEC. CORP.

4 @ - 3/8" x 4' x 2' plate  
3 @ - 1/2" x 4' x 8' plate  
30' - 6" I Beam  
90' - 3" I Beam

Material

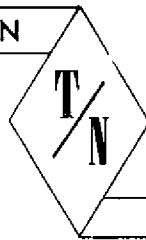
End View



IB = I Beam  
P = Plate



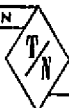
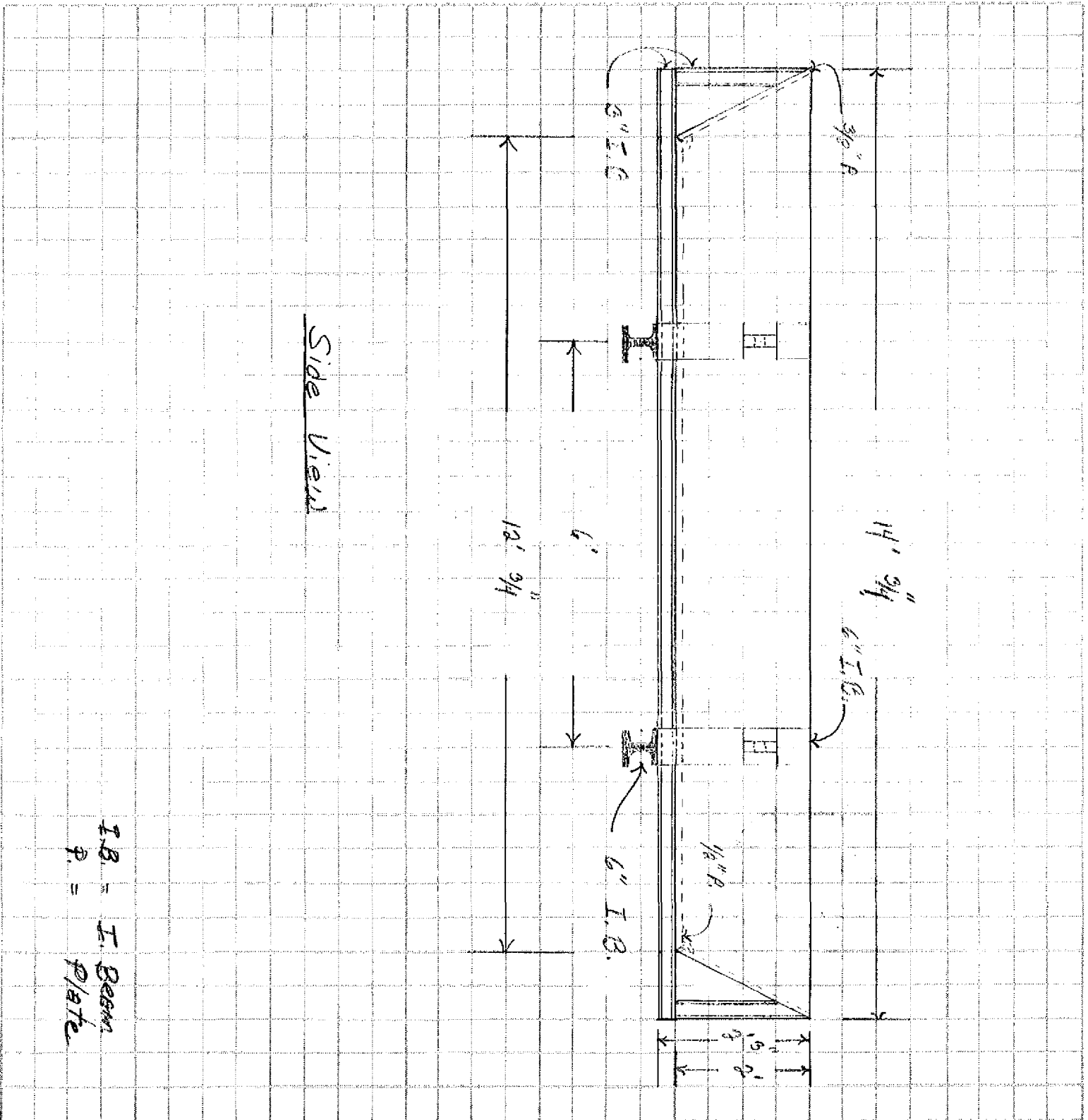
DISTRIBUTORS FOR:  
EXTREMULTUS  
LINK-BELT  
U.S. RUBBER  
WESTINGHOUSE ELEC. CORP.



# Transco Northwest, Inc.

CONVEYING AND RUBBER SPECIALISTS

1301 N. W. 12TH AVE. • PORTLAND, OREGON 97209 • PHONE 226-3861  
SEATTLE OFFICE: 7440 PERIMETER ROAD SO. • SEATTLE, WN. 98108 • PH. 722-0655



POWER TRANSMISSION

DISTRIBUTORS FOR:  
EXTREMULTUS  
LINK-BELT  
U.S. RUBBER  
WESTINGHOUSE ELEC. CORP.



# Transco Northwest, Inc.

CONVEYING AND RUBBER SPECIALISTS

1301 N. W. 12TH AVE.

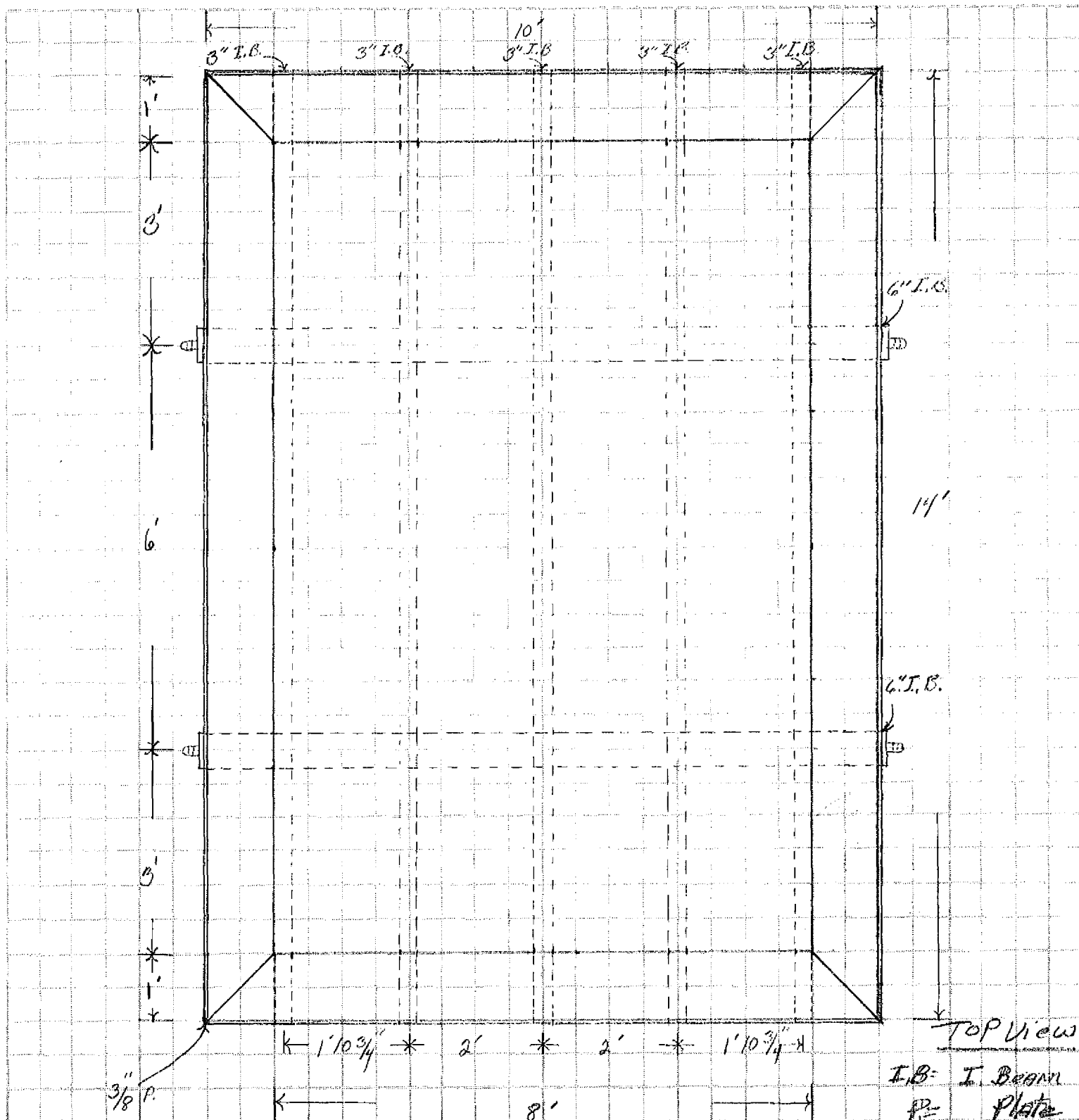
• PORTLAND, OREGON 97209

• PHONE 226-3861

SEATTLE OFFICE: 7440 PERIMETER ROAD SO.

• SEATTLE, WN. 98108

• PH. 722-0655



POWER TRANSMISSION



Transco Northwest, Inc.

CONVEYING AND RUBBER SPECIALISTS

PORTLAND  
226-3861

PHONE

SEATTLE  
722-0655



January 23, 1967

ED 6-15

Mr. W. A. Kistler  
Superintendent  
Portland, Oregon

Dear Sir:

WASTE LIME DISPOSAL

X

I would like to confirm my verbal authorization for your purchase of a used motor and a short section of screw conveyor flight, this equipment to be used in further developing a method of disposing of waste lime.

Yours truly,

REW:TM

cc: A.L. Jr.

OREGON STATE SANITARY AUTHORITY  
APPLICATION FOR WASTE DISCHARGE PERMIT  
INDUSTRIAL WASTES

OFFICE USE ONLY

Appl. No. _____
Received _____
_____
_____
_____

General Instructions for Applicants

DEC 15 1967

1. Please complete and submit this application before \_\_\_\_\_.
2. Please read the accompanying sheets entitled "Pertinent Sections of Chapter 426, Oregon Laws 1967 which relate to Waste Discharge Permits" and "General Information for Applicants" before attempting to fill out the application.
3. Please read the entire application form before attempting to complete any part of it.
4. Where a company operates several different plants, a separate application is required for each division or location. Where two or more industries or divisions use the same treatment works or outfall to the river, a single application can be filed.
5. Please submit the application in triplicate.
6. Fill the application in completely. Incomplete applications may be returned to the applicant for completion.
7. If the requested information is unknown or for any reason unavailable or not applicable, indicate so and explain why.
8. The applicant may be required to submit additional information or presently unknown information before his application can be processed and a permit issued.
9. Completed applications should be mailed to:

Oregon State Sanitary Authority  
P. O. Box 231  
Portland, Oregon 97207  
Attention: Waste Discharge Permit Program

+++++

IN ACCORDANCE WITH THE PROVISIONS OF SECTION 6 OF CHAPTER 426, OREGON LAWS 1967, APPLICATION IS HEREBY MADE FOR A PERMIT TO DISCHARGE WASTES INTO THE WATERS OF THE STATE OF OREGON.

.....

I. IDENTIFICATION OF APPLICANT

This information is intended to identify the applicant and his responsible representatives as well as the specific location of the facilities producing and discharging wastes and the receiving stream.

A. OFFICIAL NAME AND ADDRESS OF APPLICANT

Ash Grove Lime & Portland Cement Company  
13939 N. Rivergate Boulevard  
Portland, Oregon 97203

B. LOCATION OF PLANT DISCHARGING WASTES IF DIFFERENT FROM ABOVE

## C. NAME, TITLE, ADDRESS, AND TELEPHONE NUMBER OF OFFICIAL RESPONSIBLE FOR PERMIT

## 1. Principal

**R. M. Cox, Executive Vice President**  
**101 West 11th Street**  
**Kansas City, Missouri 64105**  
**Phone: Victor 2-4455**

## 2. Alternate(s)

**W. A. Kistler, Superintendent**  
**13939 N. Rivergate Boulevard**  
**Portland, Oregon 97203**  
**Phone: 286-1677**

## D. NAME(S) OF RECEIVING STREAM(S)

**Willamette River**

II. SOURCE AND CHARACTER OF RAW WASTE

This information is intended to identify and describe the quantity and quality of raw waste as well as the nature of the process producing the waste. The information will be used to establish discharge requirements and for the planning and projection of future water pollution control requirements.

## A. PRODUCTS PRODUCED OR PROCESSED

List all products produced or processed which result in the production of wastes, the associated design daily production capacity, and the time of year each product is produced or processed.

**Limestone and lime processed each day. Waste products, cooling water from the lime kilns and a small amount of dust from the dust collectors.**

## B. NORMAL PLANT OPERATING SCHEDULE

☒ Year round ☐ Seasonal From \_\_\_\_\_ To \_\_\_\_\_

Hours/day operated: M 24 T 24 W 24 Th 24 F 24 S 24 S 24

## C. WATER SUPPLY

	Source of Supply	Inplant Treatment Provided Before Use	Quantity Used Gallons/Day
Domestic	<u>Private Well</u>	<u>none</u>	<u>500 gal/day</u>
Cooling	<u>" "</u>	<u>none</u>	<u>20,000 gal/day</u>
Industrial	<u>" "</u>	<u>none</u>	<u>5,000 gal/day</u>

## D. RAW MATERIALS AND CHEMICALS USED

List the significant raw materials and chemicals used, indicate the quantity used per day and average days per month used.

<u>Description (Common Name)</u>	<u>Quantity Used/Day</u>	<u>Average Days per Month Used</u>
<b>Limestone</b>	<b>300 Ton</b>	<b>30 days</b>

## E. FLOW DIAGRAM OF WASTE PRODUCING PROCESS(ES)

A schematic diagram of the basic production process or processes where wastes are produced which shows the points of addition of raw materials, chemicals, and water, and points of waste discharge is attached to and made a part of this application as exhibit "A".

## F. QUANTITY AND QUALITY OF WASTES BEFORE FORMAL WASTE TREATMENT

**DISCHARGE #1** Give as much information as possible which indicates the quantity and quality of the wastes after any inplant reuse but prior to formal waste treatment.

## 1. General Parameters

	<u>Flow gal/day</u>	<u>pH</u>	<u>Temp.</u>	<u>BOD mg/l</u>	<u>Susp.Solids mg/l</u>
Average (Operating Day)	<u>15,000</u>	<u>+8.8</u>	<u>56°</u>	<u>not appl.</u>	<u>          </u>
Maximum (Operating Day)	<u>20,000</u>	<u>+8.8</u>	<u>56°</u>	<u>not appl.</u>	<u>          </u>
Minimum (Operating Day)	<u>10,000</u>	<u>+8.8</u>	<u>55°</u>	<u>not appl.</u>	<u>          </u>

## 2. Other Parameters

(Include color, turbidity, conductivity, acidity, alkalinity, heavy metals, toxic components, etc., where applicable.)

**One discharge is clean clear water.**

**The other is limestone dust and quicklime dust mixed with water and milky in color, non-toxic, no heavy metals, or conductivity.**

3. If this data is based on a limited number of samples rather than a continuous waste quality monitoring program, indicate how samples were collected, how often, and when.

**This information is based on a small amount of samples taken at discharge points.**

## DISCHARGE #2

## 1. General Parameters

	Flow <u>gal/day</u>	<u>pH</u>	<u>Temp.</u>	BOD <u>mg/l</u>	Susp. Solids <u>mg/l</u>
Average (Operating Day)	<u>1,500</u>	<u>+8.8</u>	<u>95°</u>	<u>      </u>	<u>      </u>
Maximum (Operating Day)	<u>2,000</u>	<u>+8.8</u>	<u>95°</u>	<u>      </u>	<u>      </u>
Minimum (Operating Day)	<u>1,000</u>	<u>+8.8</u>	<u>95°</u>	<u>      </u>	<u>      </u>

**III. POLLUTION CONTROL MEASURES EMPLOYED AND PROPOSED**

This information is intended to identify and describe all existing pollution control measures and facilities as well as any that are proposed for installation.

**A. DESCRIPTION OF TREATMENT AND CONTROL MEASURES EMPLOYED**

A brief narrative statement describing all existing inplant and external water pollution control facilities or measures presently employed at the site is attached to and made a part of this application as exhibit septic tank and drain field.

**B. PLANT SITE MAP (8½ x 11 inch size is preferred)**

A map showing the overall plant site including the location of treatment facilities, outfall lines, and the receiving stream is attached to and made a part of this application as exhibit "B".

**C. SCHEMATIC DIAGRAM OF TREATMENT FACILITIES**

A schematic diagram of the waste treatment facilities employed is attached to and made a part of this application as exhibit Not available at this time.

**D. PLANT HISTORY**

A brief narrative statement which gives the history of the plant including the year of establishment, years when expansions or major modifications occurred, and the years when various pollution control measures were taken or facilities installed is attached to and made a part of this application as exhibit The present plant was constructed in 1964 and all major pollution control equipment was included in the initial design.

**E. PROPOSED POLLUTION CONTROL MEASURES**

A statement describing proposed pollution control measures, if any, together with a proposed schedule for completion is attached to and made a part of this application as exhibit None.

**IV. QUANTITY AND QUALITY OF EFFLUENTS**

This information is intended to describe the quantity and quality of the wastes for which the applicant requests a discharge permit as well as the location and method of disposal of all other wastes or components removed by the treatment system.

**A. EFFLUENT QUANTITY AND QUALITY****DISCHARGE #1**

Give as much information as possible which indicates the quantity and quality of wastes discharged to the waters of the state.

**1. General Parameters**

	Flow gal/day	BOD mg/l	lbs/day	Susp. Solids mg/l	lbs/day	pH	Temp.
AVERAGE (Oper. Day)	<u>15,000</u>					<u>+8.8</u>	<u>56°</u>
MAXIMUM (Oper. Day)	<u>20,000</u>					<u>+8.8</u>	<u>56°</u>
MINIMUM (Oper. Day)	<u>10,000</u>					<u>+8.8</u>	<u>56°</u>

**2. Other Parameters (Include color, turbidity, conductivity, acidity, alkalinity, heavy metals, toxic components, etc., where applicable.)**

One discharge is clean clear water.

The other is limestone dust and quicklime dust mixed with water and milky in color, non-toxic, no heavy metals, or conductivity.

**DISCHARGE #2****1. General Parameters**

	Flow	BOD		Susp. Solids		pH	Temp.
	gal/day	mg/l	lbs/day	mg/l	lbs/day		
Average (Oper. Day)	1,500					+8.8	95°
Maximum (Oper. Day)	2,000					+8.8	95°
Minimum (Oper. Day)	1,000					+8.8	95°

3. If this data is based on a limited number of samples rather than a continuous waste quality monitoring program, indicate how samples were collected, how often, and when.

**Samples taken at discharge.**

B. DISPOSAL OF COMPONENTS REMOVED BY TREATMENT WORKS

Indicate the location and method of disposal of all components removed by the waste treatment facilities.

C. DISPOSAL OF SANITARY SEWAGE

Indicate location and method of disposal of sanitary sewage.

**On site septic tank and drain field.**

.....  
I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED ON AND ATTACHED TO THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Applicants Name Ash Grove Lime & Portland Cement Co.

By \_\_\_\_\_

Title Executive Vice President

Date December 11, 1967



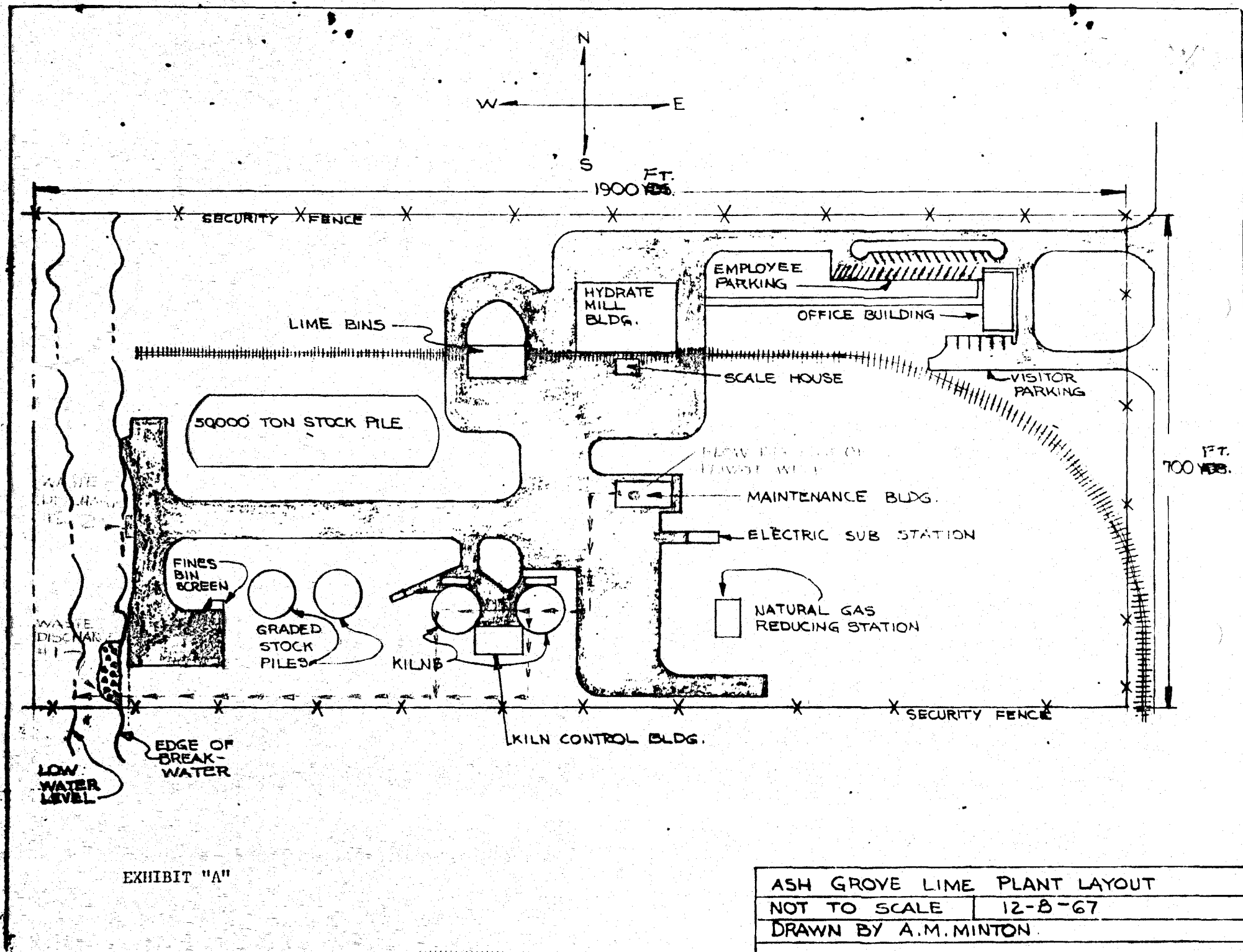
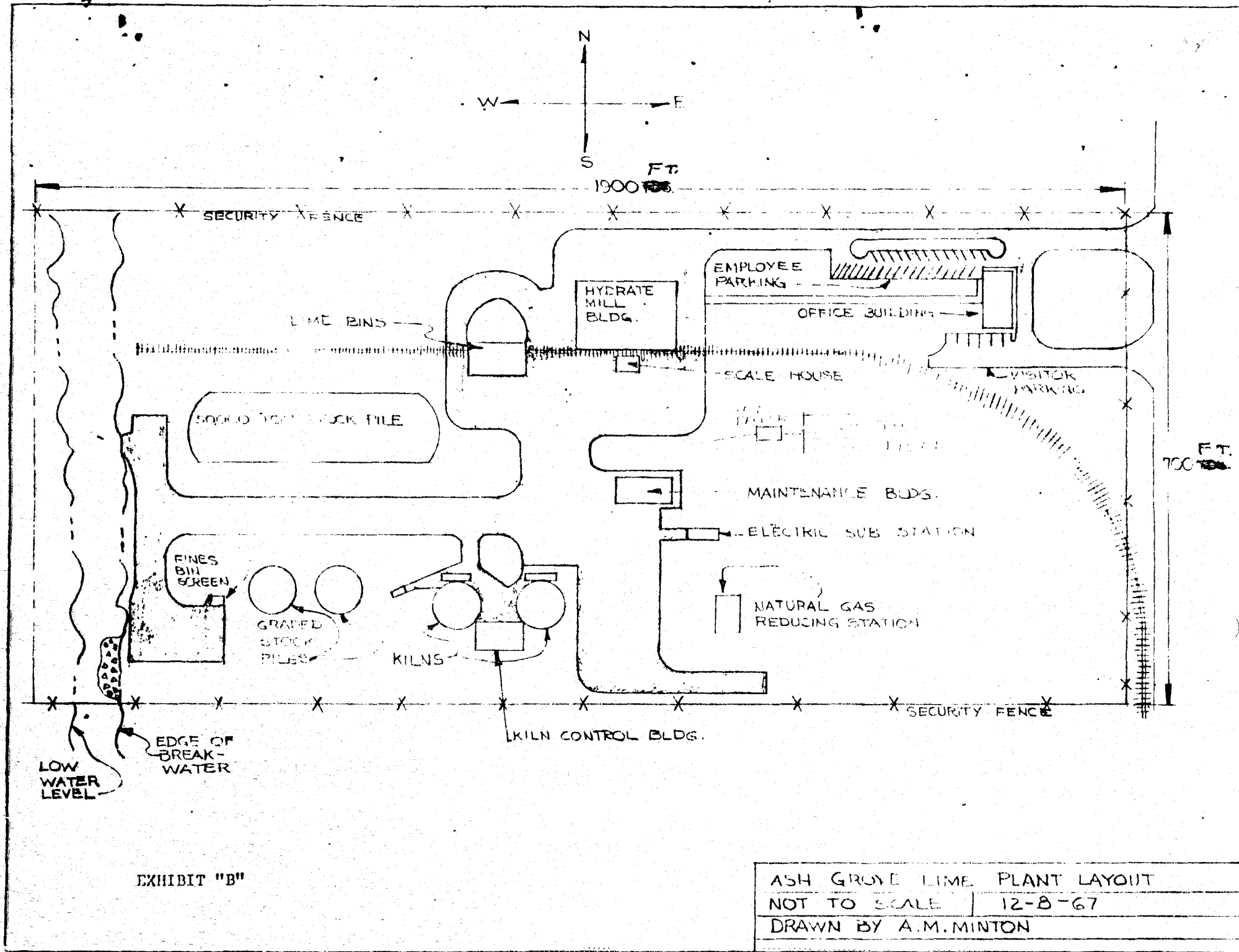


EXHIBIT "A"

ASH GROVE LIME PLANT LAYOUT	
NOT TO SCALE	12-B-67
DRAWN BY A.M. MINTON	



**Ash Grove Lime & Portland Cement Co.**

Kansas City, Missouri

ENCLOSURE

December 11, 1967

EXEC 6-11

Oregon State Sanitary Authority  
P. O. Box 231  
Portland, Oregon 97207

Attention: Waste Discharge Permit Program

Gentlemen:

In line with your recent request, you will find attached our Application For Waste Discharge Permit, in triplicate, in connection with our lime plant at Portland, Oregon. Should any question arise with reference to the information contained it is suggested you contact our Superintendent at the Portland plant, Mr. W. A. Kistler.

Yours truly,

RMC:TM

cc: W. A. Kistler

bcc: A. Lundteigen, Jr. ✓

C  
O  
P  
Y

OREGON STATE SANITARY AUTHORITY

# WASTE DISCHARGE PERMIT

<b>Issued To:</b> Ash Grove Lime & Portland Cement Co. 13939 N. Rivergate Boulevard Portland, Oregon 97203  Attention: Mr. R. M. Cox, Executive Vice President		Permit No. <u>235</u> Date Expires <u>3/31/73</u> Page <u>1</u> of <u>2</u> Application No. <u>350</u> Date Received <u>12/13/67</u>	
<b>County</b> Multnomah	<b>River Basin</b> Willamette	<b>Receiving Stream</b> Willamette River	<b>River Mile</b> 3.0

This WASTE DISCHARGE PERMIT is issued in accordance with the provisions of Chapter 426, Oregon Laws 1967, and is subject to the following conditions:

1. "Wastes," as used in this permit, refers to cooling waters, rock washing waters, dust collector disposal water, and sanitary sewage.
2. The permittee's industrial wastes shall be disposed of or discharged in a manner such that no nuisance conditions are created.
3. All plant processes and waste treatment and disposal facilities shall be operated and maintained at all times at maximum efficiency and in a manner which will minimize waste discharges.
4. Uncontaminated cooling waters may be discharged directly to the Willamette River.
5. Sanitary wastes shall be disposed of to a septic tank and drainfield system which has been installed in accordance with the recommendations of the Oregon State Board of Health and the local county health department.
6. In the event the permittee is temporarily unable to comply with any of the conditions of this permit, due to breakdown of equipment or other cause, the permittee shall immediately notify the Sanitary Authority of the breakdown or cause, and the steps taken to correct the problem and prevent its recurrence.
7. Authorized representatives of the Sanitary Authority shall be permitted access to the premises of all facilities owned and operated by the permittee at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, and carrying out other necessary functions related to this permit.
8. Whenever a significant change in the character of the waste is anticipated or whenever a change in the waste to be discharged in excess of the conditions of this permit is anticipated, a new application shall be submitted together with the necessary reports, plans, and specifications for the proposed changes. No change shall be made until plans are approved and a new permit issued.

**WASTE DISCHARGE PERMIT**

Date Expires 3/31/73

Page 2 of 2

9. In the event that a change in the conditions of the receiving waters results in a dangerous degree of pollution, the Sanitary Authority may specify additional conditions to this permit.
10. This permit is subject to termination if the Sanitary Authority finds:
- That it was procured by misrepresentation of any material fact or by lack of full disclosure in the application.
  - That there has been a violation of any of the conditions contained herein.
  - That there has been a material change in quantity or character of waste or method of waste disposal.

OREGON/STATE SANITARY AUTHORITY

By

*Herbert H. Spier*

Title

Secretary and Chief Engineer

Date

July 26, 1968

Photo Copy - Plant File

**ASH GROVE CEMENT COMPANY**

P.O. BOX 03007, ST. JOHNS STATION • PORTLAND, OREGON 97203

June 30, 1970

6-6

Mr. Graham D. Jones,  
Operations Manager  
Kansas City, Missouri 64105

C Dear Sir:

WASTE DISPOSAL

X

O We have received several calls from Mr. Borden Beck regarding our dumping of waste from our production processes into the Willamette River. Mr. Beck appears to be of the opinion we will be stopped from any waste discharge in this area in the not-too-distant future.

P I would have to agree, I do not believe we will be able to continue the present arrangement for any extended time. One of the reasons for concern is the Refuse Act of 1899, which has been brought into the light for the public by radio, television and such things as Representative Henry Reuss' "Do It Yourself Kit for Pollution Informers".

As you know, we have a permit from the State for our discharge into the river, however, the question of jurisdiction has never been settled and we could be in trouble at any time.

Y In light of the opinion of Mr. Beck and on the heels of the report by the Representative of the Department of Interior, perhaps we should consider cleaning up our water front area, consolidating our waste discharge into one or two underwater points, completely evaluate these under all conditions and then reapply to both State and Federal authorities.

I have also tried to picture what we would do with our waste should we be informed we could no longer put anything into the river. I have to admit to not finding a good solution.

I do feel we should attempt to protect ourselves and obtain as many permits as are necessary for continued operation; your comments and recommendations will be more than welcome.

Yours truly,

WAK:prm

cc: R.E.W.

*Wak*

October 15, 1970

ED 6-15

Mr. A. H. Simmons  
Sales Manager  
Portland Plant

Dear Harold:

DISPOSAL OF WASTE HYDRATE AND QUICKLIME

As you know, we are concerned about criticism of our method of dumping the above materials into the Willamette River. We are converting these products into a lime slurry and piping it into the water. We have been cited in a Federal river inspection for this practice, although it probably improves the water quality and has been approved by the state.

It seems to me that we are wasting products that would be valuable for cement production since a cement manufacturer is ultimately interested in  $\text{CaO}$  for his product. Ideally, if we could mix this material in with the rock fines we now supply to Oregon Portland, we could solve a pollution problem by giving them useable  $\text{CaO}$  at a bargain. These products consist of spilled hydrate that can't be reclaimed and under-or-overburned lime from kiln startups, etc. The quantity doesn't amount to much but constitutes a disposal problem for us. I think that any hazard from the quicklime will be dissipated after it has been blended with wet rock fines and hydrated. Of course, the hydrated lime poses no safety hazard. I doubt if the quantity will be large enough to create any raw mix proportioning problems -- this could be determined by a test run.

It would be appreciated if you could approach the proper person with Oregon Portland and discuss this possibility with him. An arrangement would be mutually beneficial to both of our organizations.

Yours truly,

GDJ:ha

cc: R.E.W.

J.W.W.

W.A.K.

AS GROVE CEMENT COMPANY

P.O. 03007, ST. JOHNS STATION • PORTLAND, OREGON 97203

October 30, 1970

6-6

C  
O  
P  
Y

Mr. Graham D. Jones  
Operations Manager  
Kansas City, Missouri

Dear Graham;

DISPOSAL OF WASTE HYDRATE & QUICKLINE  
ED-6-15

With reference to your letter of October 15, 1970 on above subject, Mr. Kistler and I visited with Mr. Eric Volbeck of Oregon Portland Cement Company about adding these waste products to our fines.

Mr. Volbeck was very cooperative, with an attitude of "lets try it and see what happens". He could not foresee any problems other than he did request we try to mix the fines and waste to help eliminate any dust problems. I believe Bill has already started the procedure and it would appear at this time that one more waste problem is solved.

Mr. Volbeck said they receive a barge every Sunday - so the amount of material we sell them should certainly be no problem mixed into this volume.

Yours very truly,



AHS:fmc

cc:

  
J.E.M.  
J.W.W.  
W.A.K.



**ASH GROVE CEMENT COMPANY**

P.O. BOX 03007, ST. JOHNS STATION • PORTLAND, OREGON 97203

March 4, 1971

6-10

Mr. Graham D. Jones  
Operations Manager  
Kansas City, Missouri

Dear Sir:

STONE WASHING FACILITIES

As we have discussed in the past, we are trying to clean up our river front area. In order to do this, we should clean up the area under and around the fines bin where we are washing our limestone.

At the present time, the wash water goes directly into the River west of the fines bin, after being held for a short time in a settling pond made by piling some of the fines around as shown in the enclosed pictures.

We are installing an open pipe from under the bin to the east and then to the south and will discharge this wash water through the same pipe, to the River, as we are now using for the water seal water from the kilns.

We would like to install some type of settling area that does not require the use of fines. It would have to be rugged enough to withstand the use of the front end loader for cleaning and should be large enough to have retention time enough to let the majority of the limestone solids settle out.

We have been thinking about pouring a concrete wall on three sides of the fines bin between the uprights and then we would only have to dam the west side with fines. This would work to some extent; but, do not know if the retention time would be sufficient.

We would welcome any suggestions or opinions you might have.

Yours truly,

*WAK*

WAK:dh

cc: REW



June 30, 1971

File: ED 6-26

*I have file  
copy of permit.  
HJ*

U. S. Army Engineer District, Portland  
Post Office Box 2946  
Portland, Oregon 97208

Gentlemen:

WATER DISCHARGE PERMIT APPLICATION

Attached please find a permit application for a waste water discharge from our lime manufacturing plant in the Rivergate Industrial District of Portland.

By copy of this letter, a duplicate application is being submitted to the Department of Environmental Quality, State of Oregon, for State certification.

A check for \$100 covering application fee is attached.

Yours very truly,

GDJ:ha

cc: Mr. Harold L. Sawyer, Chief Engineer  
Waste Discharge Permit and Tax Credits Section  
Department of Environmental Quality  
State Office Building, 1400 S.W. 5th Avenue  
Portland, Oregon 97201

cc: W.A.K.

Attachments

# DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

## APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

### SECTION I. GENERAL INFORMATION

1. State <u>O R</u>	Application Number (to be assigned by Corps of Engineers) _____-_____-_____-_____-_____-_____-_____-_____-_____-		
	Div.	Dist.	Type
			Sequence No.

2. Name of applicant and title of signing official Ash Grove Cement Company  
Vice President and Secretary

3. Mailing address of applicant 1000 TenMain Center  
Kansas City, Missouri 64105

4. Name, address, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.  
W. A. Kistler, Superintendent  
P.O. Box 03007, St. Johns Station  
Portland, Oregon 97203  
Phone: 286-1677

NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form.

#### Required Information

- All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged information.
- The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application.
- If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply.
- Drawings required by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 of Section II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

#### Fees

If any discharge or deposit is involved, an application fee of \$100 must be submitted with this application. An additional \$50 is required for each additional point of discharge or deposit.

#### Signature

- If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor. Other signature requirements are discussed in the pamphlet.
- If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

18 U.S.C. Section 1001 provides that:

Signature of Applicant

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

#### FOR CORPS OF ENGINEERS USE ONLY

Acronym name of applicant \_\_\_\_\_

Are discharge structures

Major? ☐

Minor? ☐

N/A? ☐

Date received, form not complete \_\_\_\_\_

Date received, form complete \_\_\_\_\_

but without certificate \_\_\_\_\_

to received, form complete \_\_\_\_\_

Date of Cert./Ltr. \_\_\_\_\_

day mo yr

Date sent to EPA, form not complete \_\_\_\_\_

Date sent to EPA, NOAA, D/I, AEC,  
FPC in complete form \_\_\_\_\_

day mo yr

ENGINEERING  
MAY 71 4345

Page 1 of 3

1. Date

May 21 71  
mo day yr

(Office use only)

3. Check type of application:

a. Original



b. Revision



7. Number of original application

8. Name of facility where discharge or construction will occur.

Ash Grove Cement Company

Rivergate Lime Plant - Portland Oregon

9. Full mailing address of facility named in item 8 above.

Ash Grove Cement Company

P. O. Box 03007, St. Johns Station

Portland, Oregon 97203

10. Names and mailing addresses of all adjoining property owners whose property also adjoins the waterway.

Port of Portland, P.O. Box 3529, Portland, Oregon 97208

Waterway Terminals Company, P. O. Box 3349, Portland, Oregon 97208

11. Check to indicate the nature of the proposed activity:

a. Dredging



b. Construction



c. Construction with Discharge



b. Discharge only



12. If activity is temporary in nature, estimate its duration in months. Dredging has never been necessary but could be carried out in a few days if required.

If application is for a discharge:

13. List intake sources

Source	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal or private water supply system	1 9
Surface water body	
Ground water	
Other	

14. Describe water usage within the plant

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Cooling water Kilns	1 5
Boiler Feed water	
Process water Hydrator	0 1
Sanitary system*	0 1
Other Rock washing	0 2

15. List volume of discharges or losses other than into navigable waters.

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal waste treatment system	
Surface containment (septic tank and filter bed)	0 1
Underground disposal	
Waste Acceptance firms	
Evaporation	
Consumption	0 1

\* Indicate number employees served per day

18

precise location of the activity must be described.

a. Name the corporate boundaries within which the structures exist or the activity will occur.

16. State Oregon

17. County Multnomah

18. City or Town Rivergate Industrial District

b. Name of waterway at the location of the activity

19. Willamette River

20. Maps and sketches which show the location and character of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. For construction or work in navigable waters for which a separate permit is sought under 33 U.S.C. 403, the character of each structure must be fully shown on detailed plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted.

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document	Id. No.	Date	Issuing Agency
Waste Discharge Permit	233	12-13-67	Oregon State

23. Check if facility existed or was lawfully under construction prior to April 3, 1970.



24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

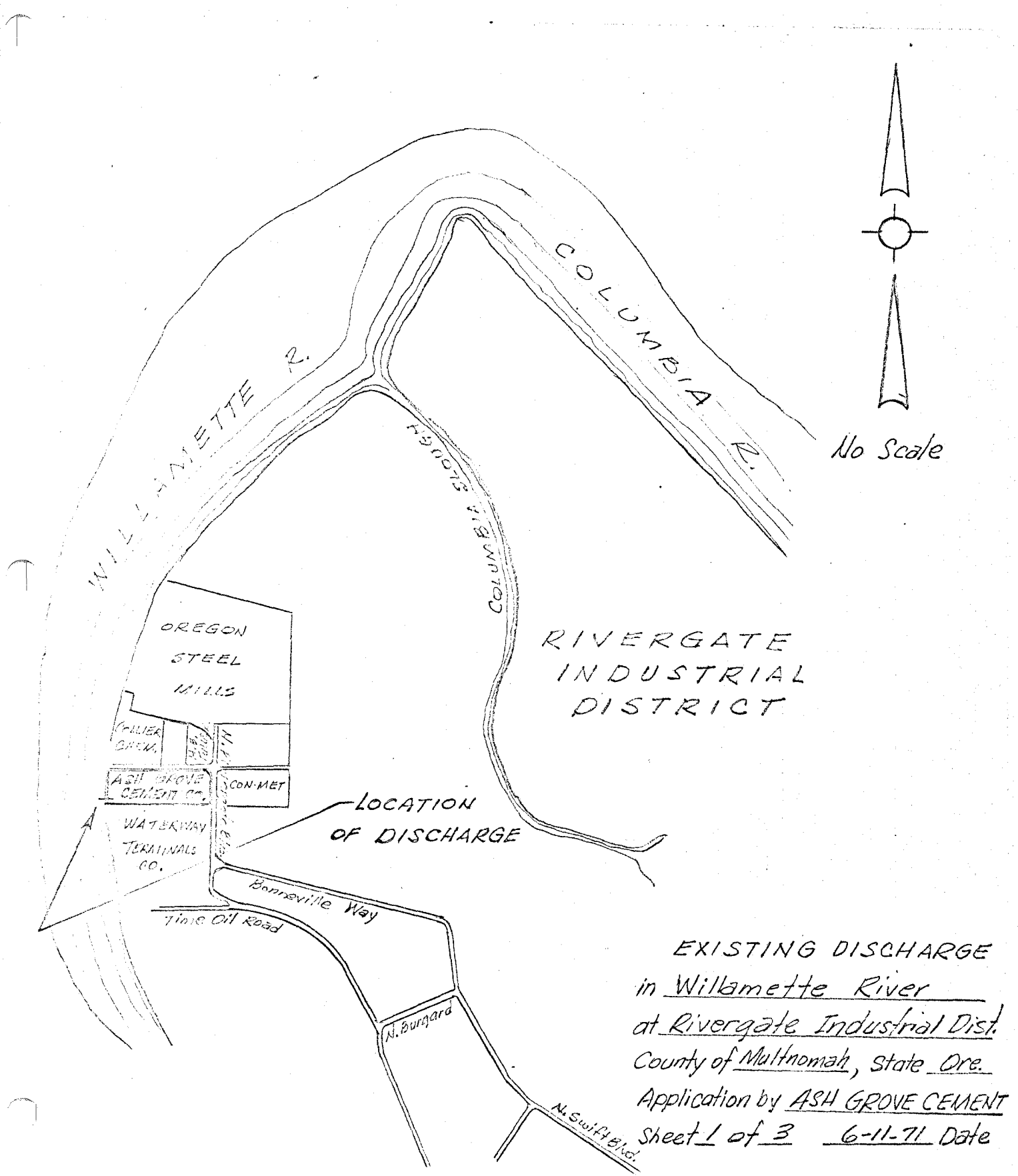
1. Type - limestone superfines not trapped in settling basin.
2. Volume - unknown - no appreciable filling noted over seven years.
3. Method of measurement - soundings.

25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids which may be deposited and to determine its effect upon the waterway.

1. No method decided on yet - investigating continuous flow rate and turbidity metering at present time.
2. Appears to remain in suspension with very little settling.

26. State rates and periods of deposition described in Item 25.

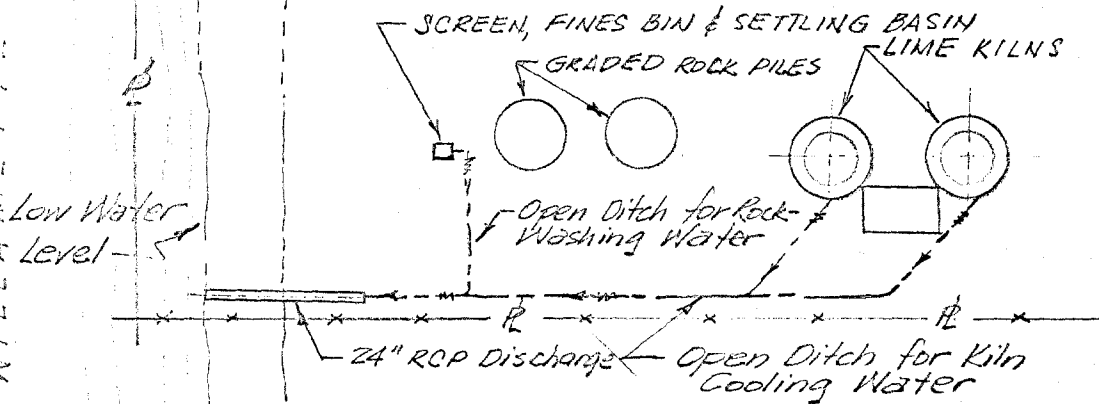
Our cooling water discharge rate will be uniform at approximately 150,000 gallons per day, except when we are screening and washing stone. This operation will occur approximately 32 hours a week and not on a schedule. At these times we will increase our discharge by 4,500 gallons per hour and it will contain some suspended solids.



EXISTING DISCHARGE  
in Willamette River  
at Rivergate Industrial Dist.  
County of Multnomah, State Ore.  
Application by ASH GROVE CEMENT  
Sheet 1 of 3 6-11-71 Date

— LOCATION MAP —

WILLAMETTE R.



— PLAN —  
Scale of Feet  
200 150 100 50 0 200

NOTE: Settling basin collects rock-washing water allowing suspended solids to settle out. Sediment is cleaned out periodically with front-end loader.

Future Concrete Settling Basin  
(Presently using walls made of rock fines to form basin)

Washed Rock  
Fines Bin

Future 12"  $\phi$   
Over flow

El. 37.0

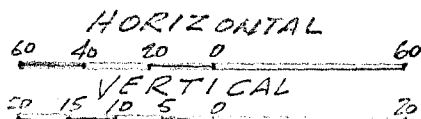
El. 27.0

Existing Open Ditch

Existing 24" RCP Discharge

Low Water  
Elev. 0.07

— SECTION —  
Scales of Feet



EXISTING DISCHARGE  
in the Willamette River  
at Rivergate Industrial Dist.  
County of Multnomah, State Ore.  
Application by ASH GROVE CEMENT  
Sheet 2 of 3 6-11-71 Date





# SECTION II. PLANT PROCESS AND DISCHARGE DESCRIPTION

1. Discharge described below is a. Present <input checked="" type="checkbox"/> b. Proposed new or changed <input type="checkbox"/>		2. Implementation schedule <input type="checkbox"/>		(Office use only)	
Name of corporate boundaries within which the point of discharge is located. State <u>Oregon</u> County <u>Multnomah</u>				6. Discharge Serial No. <u>001</u>	
3. <u>Oregon</u>		4. <u>Multnomah</u>		5. <u>Rivergate Industrial District</u>	
State the precise location of the point of discharge. 7. Latitude <u>45</u> Degrees; <u>37</u> Min; <u>    </u> Sec. 8. Longitude <u>122</u> Degrees; <u>45</u> Min; <u>    </u> Sec.				9. Name of waterway at the point of discharge. <u>Willamette River</u>	
10. Has application for water quality certification or description of impact been made? If so, give date: <div style="display: flex; justify-content: space-between;"> <div>           Date <u>    </u> mo <u>    </u> day <u>    </u> yr         </div> <div>           Check if certificate is attached to form <input type="checkbox"/> </div> <div>           Name Issuing Agency <u>Not made</u> </div> </div>					
11. Narrative description of activity (include terms of general 4-digit Standard Industrial Classification, and specific manufacturing process). <u>General Process: Manufacture of quicklime and hydrated lime</u> <u>Specific Processes:</u> <u>(1) Limestone is washed to remove fines</u> <u>(2) Kilns use water for cooling and as air seal</u>					
12. Standard industrial classification number. <u>SIC 3274</u>		13. Principal product. <u>Lime</u>		14. Amount of principal product produced per day. <u>200 ton</u>	
15. Principal raw material.		16. Amount of principal raw material consumed per day.		17. Number of batch discharges per day.	
18. Average gallons per batch discharge.		19. Date discharge began. <u>MAR</u> <u>6</u> <u>4</u> <u>mo</u> <u>day</u> <u>yr</u>		20. Date discharge will begin. <u>    </u> <u>    </u> <u>    </u> <u>mo</u> <u>day</u> <u>yr</u>	
21. Describe waste abatement practices. <u>BSOLID - Sanitary wastes are treated with septic tank and tile field</u> <u>ESEGRE - Rock washing water and solids are held in a settling basin</u> <u>until most solids settle out; effluent combines with cooling water</u> <u>and discharges to river. Plans are being made to upgrade settling</u> <u>basin.</u>					

# PHYSICAL DESCRIPTION OF INTAKE WATER AND DISCHARGE

Intake	Discharge				(Office use only)		
	UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	CONTINUOUS MONITORING
Parameter and Code	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Flow (Gallons per day) 00056	190,000	--	170,500	62,000,000	80,000,000	OTHR	ABS
pH 00400	9.0	--	8.2			OTHR	ABS
Temperature (Winter) (°F) 74028	58°-60°	--	62°	48°	70°	OTHR	ABS
Temperature (Summer) (°F) 74027	58°-60°	--	75°	65°	82°	OTHR	ABS

Discharge Serial No.  
001

23.

## DISCHARGE CONTENTS

PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT
Color 00080	X		Aluminum 01105		X	Nickel 01067		X
Turbidity 00070	X		Antimony 01097		X	Selenium 01147		X
Radioactivity 74050		X	Arsenic 01002		X	Silver 01077		X
Hardness 00900	X		Beryllium 01012		X	Potassium 00937		X
Solids 00500	X		Barium 01007		X	Sodium 00929	X	
Ammonia 00610 See Part A			Boron 01022		X	Titanium 01152		X
Organic Nitrogen 00605 See Part A			Cadmium 01027		X	Tin 01102		X
Nitrate 00520 See Part A			Calcium 00916	X		Zinc 01092		X
Nitrite 00615		X	Cobalt 01037		X	Algicides 74051		X
Phosphorus 00665 See Part A			Chromium 01034		X	Oil and Grease 00550		X
Sulfate 00945		X	Copper 01042		X	Phenols 32730		X
Sulfide 00745		X	Iron 01045	X		Surfactants 38260		X
Sulfite 00740		X	Lead 01051		X	Chlorinated Hydrocarbons 74052		X
Bromide 71370		X	Magnesium 00927	X		Pesticides 74053		X
Chloride 00940		X	Manganese 01055		X	Fecal Streptococci Bacteria 74054		X
Iodide 00720		X	Mercury 71900		X	Coliform Bacteria 74056		X
Fluoride 00951		X	Molybdenum 01062		X			

☒ Yes☐ No

24. If yes, have steps been taken to insure that there exists no possibility of any such known hazardous or potentially hazardous substance entering this discharge?

☒ Yes☐ No

25. Remarks.

3 Samples in 6 months.

#13 was used for column 4, Part A

The information above completes the basic reporting requirements which are required of all applicants. Those applicants whose discharge results from an activity included within any of the Standard Industrial Classification Code (SIC Code) categories listed below must complete Part A of this form as well.

### CRITICAL INDUSTRIAL GROUPS

SIC 098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC 285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC 10-14	DIVISION B - MINING	SIC 2871	FERTILIZERS
SIC 201	MEAT PRODUCTS	SIC 2879	AGRICULTURAL PESTICIDES, AND OTHER AGRICULTURAL CHEMICALS, NOT ELSEWHERE CLASSIFIED
SIC 202	DAIRY PRODUCTS	SIC 2891	ADHESIVES AND GELATIN
SIC 203	CANNED PRESERVED FRUITS, VEGETABLES (EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC 2892	EXPLOSIVES
SIC 2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND SEAFOODS	SIC 29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC 204	GRAIN MILL PRODUCTS	SIC 3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC 206	SUGAR	SIC 3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC 207	CONFECTIONARY AND RELATED PRODUCTS	SIC 311	LEATHER TANNING AND FINISHING
SIC 208	BEVERAGES	SIC 32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC 209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC 331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC 22	TEXTILE MILL PRODUCTS	SIC 332	IRON AND STEEL FOUNDRIES
SIC 23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC 333, 334	PRIMARY SMELTING AND REFINING OF NON-FERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC 242	SAWMILLS AND PLANING MILLS	SIC 336	NONFERROUS FOUNDRIES
SIC 2432	VENEER AND PLYWOOD	SIC 347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC 2491	WOOD PRESERVING	SIC 35	MACHINERY, EXCEPT ELECTRICAL
SIC 26	PAPER AND ALLIED PRODUCTS	SIC 36	ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES
SIC 281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)	SIC 37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC 2818	INDUSTRIAL ORGANIC CHEMICALS	SIC 3731	SHIP BUILDING AND REPAIRING
SIC 282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	SIC 491	ELECTRIC COMPANIES AND SYSTEMS
SIC 283	DRUGS	SIC 493	COMBINATION COMPANIES AND SYSTEMS
SIC 284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS		

# PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

(Office use only)

Discharge Serial No.

001

## INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

Intake	Discharge										
PARAMETER AND CODE	(1) DAILY AVG. CONCENTRATION	(2) MAXIMUM CONCENTRATION	(3) MAXIMUM POUNDS PER PROCESS UNIT	(4) DAILY AVG. CONCENTRATION	(5) MAXIMUM POUNDS PER DAY	(6) AVERAGE POUNDS PER DAY	(7) SAMPLE TYPE	(8) SAMPLE FREQUENCY	(9) METHOD OF ANALYSIS	(10) CONTINUOUS MONITORING	(11)
ALKALINITY (as Ca CO <sub>3</sub> )											
00410	110		40,000	35#	7,000	4,900	7,000	AVR	OTHR	APH AWWA WPCF	ABS
B.O.D. 5-DAY											
00310	Less than 1		9	0.013#	2.74#	1.9	2.74#	"	"	"	"
CHEMICAL OXYGEN DEMAND (C.O.D.)											
00340	21		490	0.55#	110#	77	110#	"	"	"	"
TOTAL SOLIDS											
00000	400		51,600	46.65#	9,330	6.550	9,330	"	"	"	"
TOTAL DISSOLVED SOLIDS											
70300	90		100	0.65#	130#	90	130	"	"	"	"
TOTAL SUSPENDED SOLIDS											
00530	310		51,500	46.0#	9,200	6.460	9,200	"	"	"	"
TOTAL VOLATILE SOLIDS											
00505	140		500	1.3#	261#	183	261#	"	"	"	"
AMMONIA (as N)											
00610	0.9		1.4	.0068	1.37	.96	1.37#	"	"	"	"
KJELDAHL NITROGEN											
00625	3.0		2.5	0.02#	4.16#	2.94	4.16#	"	"	"	"
NITRATE (as N)											
00620	0.04		0.32	0.0005	0.105	0.074	0.105	"	"	"	"
SPHORUS TOTAL (as P)											
00665	0.05		0.05	.0004	.071	.05	.071	"	"	"	"

# PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

(Office use only)

Discharge Serial No.  
001

## INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

Intake		Discharge										
PARAMETER AND CODE	(1) DAILY AVG. CONCENTRATION	(2) MAXIMUM CONCENTRATION	(3) MAXIMUM POUNDS PER PROCESS UNIT	(4) DAILY AVG. CONCENTRATION	(5) MAXIMUM POUNDS PER DAY	(6) AVERAGE POUNDS PER DAY	(7) SAMPLE TYPE	(8) SAMPLE FREQUENCY	(9) METHOD OF ANALYSIS	(10) CONTINUOUS MONITORING	(11)	
ALKALINITY (as Ca CO <sub>3</sub> ) 00410	110		40,000	25 31#	7000 6,220#	4900 4,370	7000 6,220#	AVER	OTHR	APH AWWA WPCF	ABS	
B.O.D. 5-DAY 00310	Less than 1		9	0.013#	2.74#	1.9	2.74#	AVER	OTHR	"	"	
CHEMICAL OXYGEN DEMAND (C.O.D.) 00340	21		490	0.55#	110#	77	110#	"	"	"	"	
TOTAL SOLIDS 500	400		51,600	46.65 41.5#	9320 9,316#	6550 6,500	9320 1,382#	"	"	"	"	
TOTAL DISSOLVED SOLIDS 70300	90		100	0.65 .6#	130 120#	90 94	130 120#	"	"	"	"	
TOTAL SUSPENDED SOLIDS 00530	310		51,500	46.0 2.1#	9200 426#	6260 300	9200 426#	"	"	"	"	
TOTAL VOLATILE SOLIDS 00505	140		500	1.3#	261#	183 180	261#	"	"	"	"	
AMMONIA (as N) 00610	0.9		1.4	.0068 .006#	1.37 1.22#	.96 .8	1.37 1.22#	"	"	"	"	
KJELDAHL NITROGEN 00625	3.0		2.5	0.02#	4.16#	2.94 2.8	4.16#	"	"	"	"	
NITRATE (as N) 00620	0.04		0.32	0.0005 .0004#	0.105 .085#	0.074 .06	0.105 .085#	"	"	"	"	
PHOSPHORUS TOTAL (as P) 00665	0.05		0.05	.0002 .0003#	.071 .068#	.05	.071 .068#	"	"	"	"	

January 8, 1973

File: ED 13-53

Mr. Charles K. Ashbaker, Assistant Director  
Water Quality Division  
Department of Environmental Quality  
1234 Southwest Morrison Street  
Portland, Oregon 97205

WASTE DISCHARGE PERMIT RENEWAL  
FILE NO. 3690

We are returning attached a completed application form for renewing our present Waste Discharge Permit which expires on March 31, 1973.

If further information is required, please contact our plant superintendent, W. A. Kistler.

---

Graham D. Jones

GDJ:ha

cc: W. A. Kistler

Attachment

ail one (1) copy to:

DEPARTMENT OF ENVIRONMENTAL QUALITY  
1234 S. W. Morrison Street  
Portland, Oregon 97205

Attention: Permit Program

APPLICATION TO THE DEPARTMENT OF ENVIRONMENTAL QUALITY  
FOR RENEWAL OF PERMIT

A. REFERENCE INFORMATION:

Official Name and Address of Applicant (Owner) Ash Grove Cement Company 13939 North Rivergate Boulevard Portland, Oregon 97203		Present Permit No. <u>233</u> Date Expires <u>3-31-73</u>
Responsible Official (Name, Title, Address, Phone) George M. Wells, V. P. and Secretary 1000 TenMain Center A/C 816 Kansas City, Mo. 64105 842-4455	Alternate Responsible Official or Chief Operator William A. Kistler, Superintendent 13939 North Rivergate Boulevard Portland, Oregon 97203 Phone 286-1677	
Description of activities requiring a permit from the DEPARTMENT: (Check all that apply) <input type="checkbox"/> Construct, install, or modify waste collection, treatment, or disposal facilities. <input type="checkbox"/> Operate waste collection, treatment, or disposal facilities. <input type="checkbox"/> Discharge treated waste waters into the waters of _____. <input checked="" type="checkbox"/> (Other) <u>Discharge water and limestone dust into Willamette River</u> <u>Milky in color, non-toxic, no heavy metals, or conductivity.</u>		

B. GENERAL QUESTIONS:

1. Have the treatment or disposal methods employed, as indicated in previous applications, been altered in any way since the last application was submitted? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If yes, explain.  Two discharges have been combined into one. Thus clean cooling water is mixed with limestone washing effluent.
2. Has the quantity or quality of wastes discharged, as indicated in previous applications, been significantly changed in any way since the last application was submitted? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If yes, explain.

C. SPECIAL QUESTIONS AND REQUESTED INFORMATION:

1. If any changes in operations or waste quantity or quality are anticipated in the near future, please attach an explanation or proposal.
2. Please attach a brief report which indicates your progress in meeting the requirements and limitations of your present permit.  We have been able to meet the requirements of the present permit by careful control and observation of our discharge

I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief.

Signature of owner (or legally authorized representative)

Title Vice President and Secretary

Date January 8, 1973

June 25, 1973

18-2

Department of Environmental Quality  
1234 S. W. Morrison St.  
Portland, Oregon 97205

Attention: Mr. W. D. Leshar

Dear Sir:

RE: WASTE DISCHARGE PERMIT  
FILE NO. 3690

We have reviewed the waste discharge permit provisions and would like to submit the following comments:

I Background

The three hundred tons per day of limestone processed was arrived at as an annual average at the time of our original application to the State.

However the plant was designed for a total capacity of 400 tons per day and we are much closer to this figure now and have been for at least the last 12 months.

We would like to have this figure changed to read 400 tons per day.

II Sources

A. Since we have reviewed the permit provisions we have become concerned with the 10 gallons per minute allowed for kiln seal water.

In the original permit application to the State we show 15,000 gals. per day which was 10.4 gal. per minute and thought to be correct.

By checking the application to the Corps of Engineers I find that I must have placed the decimal incorrectly, resulting in



**Department of Environmental Quality**

a total of 150,000 gals. per day or 104 gals. per minute.

We have since measured more accurately our kiln water seal discharge and find that with both kilns in maximum production we are using approximately 18 gals. per minute.

We would like to have this figure changed to read 18 gals. per minute (continuously).

### **III Evaluation**

#### **2. EPA Guidance for Lime.**

The pounds per day allowable would be 20# instead of 17# each for both COD and suspended solids.

Changes in this paragraph would also include the 400 tons instead of 300 tons per day. Total gallons of effluent per week would change, and the average concentrations would change slightly.

This concludes any written comments we wish to make at this time, however as indicated by telephone, we would like to discuss with you, our plans for a settling basin and the necessary installation to meet the EPA Guidline Limits.

We would like to meet in your office at approximately 3:00 P.M. on July 11th if you will be available and this time would be convenient for you.

Yours truly,

WAK:fmc

cc: R. E. W.  
G. D. J.

July 18, 1973

18-2

Mr. Graham D. Jones  
Vice President-Production  
Kansas City, Missouri

Dear Sir:

WASTE DISCHARGE PERMIT

Attached find copy of letter and permit received from the Department of Environmental Quality of the State of Oregon.

We are still not washing limestone, and are in the process of putting the compressor water into the water seals.

Ray Parsons is on vacation this week, when he returns on Monday we will dig some settling ponds and then see how we come out.

Yours truly,

WAK:fmc

cc: R. E. W.

Attachment



TOM McCALL  
GOVERNOR

DIARMUID F. O'SCANNLAIN  
Director

## DEPARTMENT OF ENVIRONMENTAL QUALITY

1234 S.W. MORRISON STREET • PORTLAND, ORE. 97205 • Telephone (503) 229- 5301

JUL 16 1973

Mr. William A. Kistler, Superintendent  
Ash Grove Cement Company  
13939 N. Rivergate Boulevard  
Portland, Oregon 97203

Dear Mr. Kistler:

Re: Waste Discharge Permit  
File No. 3690

The Department of Environmental Quality has completed its review of your permit application and the comments received regarding the Proposed Permit Provisions which were mailed to you for review on June 13, 1973 and has issued the attached Waste Discharge Permit.

Condition 1 has been changed to read:

1. Prior to September 30, 1973 the permittee shall submit for approval plans and specifications for providing as soon as possible but not later than December 30, 1973, improved waste water treatment facilities which will consistently and reliably meet the effluent standards listed in Condition 2 of this permit.

The completion date in Condition 2 has been changed to conform with the requirement of Condition 1. In accordance with your request Condition 2 has also been changed as follows:

Condition 2a allows an effluent discharge not to exceed 0.325 million gallons per week.

Condition 2b allows a weekly chemical oxygen demand (COD) concentration not to exceed 52 milligrams per liter (mg/l) or 20 pounds per day.

Condition 2c allows a weekly average suspended solids (SS) concentration not to exceed 52 mg/l or 20 pounds per day.

JUL 16 1973

In accordance with a joint Department of Environmental Quality/Environmental Protection Agency Memorandum of Agreement, the Environmental Protection Agency has reviewed your Waste Discharge Permit and by letter dated June 15, 1973 has concurred with the terms and conditions of the permit and endorsed its issuance.

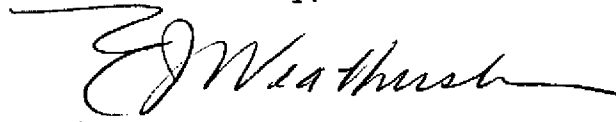
The Federal Water Pollution Control Act Amendments of 1972 require that all persons discharging pollutants to public waters have a National Pollutant Discharge Elimination System (NPDES) permit. This permit program is to be administered by the U. S. Environmental Protection Agency except in those states where authority to issue NPDES permits has been or will be transferred to a state agency.

The State of Oregon has submitted a request to EPA for authority to issue NPDES permits. It may be some weeks before Oregon receives that authority. (Oregon was granted interim authority to issue NPDES permits for a 90-day period. That interim authority expired March 19, 1973.)

The Environmental Protection Agency is currently in the process of mailing out application forms for NPDES permits. These forms should be filled out and returned to EPA as soon as possible. When Oregon has been granted authority to issue NPDES permits, the applications which have been filed will be transferred to the Department of Environmental Quality for processing. At that time a joint State/Federal permit will be issued to replace this permit and this permit will be terminated. This will be done on or before the expiration date of this permit.

You are urged to carefully read the permit and take all possible steps to comply with the conditions contained therein so that there shall not be any pollution to the environment of Oregon.

Sincerely,



*for* DIARMUID F. O'SCANNLAIN  
Director

CKA:mjb  
Attachment

cc: Portland Metro District  
Mr. George Wells, Kansas City, Mo.

# WASTE DISCHARGE PERMIT

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued in accordance with the provisions of  
ORS 449.083

Permit Number: 1514  
Expiration Date: 1-31-77  
Page 1 of 3

ISSUED TO:	REFERENCE INFORMATION
Ash Grove Cement Company 13939 N. Rivergate Boulevard Portland, Oregon 97203	File Number: 3690 Appl. No.: 1799 Received: 1-12-73 Major Bn: Willamette Minor Bn: Receiving Stream: Willamette River River Miles: 3.0 County: Multnomah

Until such time as this permit expires or is modified or revoked, Ash Grove Cement Company is herewith permitted to:

- a. Operate and maintain waste water control facilities.
- b. Discharge treated waste water to the Willamette River.
- c. Construct approved waste water treatment facilities.

All of the above activities must be carried out in conformance with the requirements, limitations and conditions which follow.

All other waste discharges are prohibited.

1. Prior to September 30, 1973 the permittee shall submit for approval plans and specifications for providing as soon as possible but not later than December 30, 1973, improved waste water treatment facilities which will consistently and reliably meet the effluent standards listed in Condition 2 of this permit.
2. After completion of the treatment facilities required by Condition 1 or December 30, 1973, whichever comes first, the quantity and quality of effluent discharged directly or indirectly to the Willamette River shall be limited as follows:
  - a. The weekly average quantity of effluent discharged shall not exceed 0.325 million gallons per week.
  - b. The weekly average chemical oxygen demand (COD) concentration shall not exceed 52 milligrams per liter (mg/l) or 20 pounds per day.
  - c. The weekly average suspended solids (SS) concentration shall not exceed 52 mg/l or 20 pounds per day.
  - d. The pH shall not be outside the range 6.5 - 8.5.
3. Until the treatment facilities required by Condition 1 are completed the permittee shall make every reasonable effort to minimize the amount of pollutants discharged.
4. All plant processes and all waste collection, treatment and disposal facilities shall be operated and maintained at all times at maximum efficiency and in a manner which will minimize waste discharges.

7/10-605

Wash  
10/1

# WASTE DISCHARGE PERMIT

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit Number: 1514  
Expiration Date: 1-31-77  
Page 2 of 3

5. All settling pond dredge spoils and other waste solids shall be utilized or disposed of in a manner which will prevent their entry into the waters of the state and such that health hazards and nuisance conditions are not created.
6. No petroleum-base products or other substances which might cause the Water Quality Standards of the State of Oregon to be violated shall be discharged or otherwise allowed to reach any of the waters of the state.
7. Sanitary wastes shall be disposed of to a septic tank and subsurface disposal system (or by other approved means) which is installed, operated and maintained in accordance with the requirements of the Oregon State Health Division and the local health department and in a manner which will prevent inadequately treated waste water from entering any waters of the state or from becoming a nuisance or health hazard.
8. The permittee shall observe and inspect all waste handling, treatment and disposal facilities and the receiving stream above and below each point of discharge at least three times per week to insure compliance with the conditions of this permit. A written record of all such observations shall be maintained at the plant and shall be made available to the Department of Environmental Quality staff for inspection and review upon request.
9. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the wastes discharged. A record of all such data shall be maintained and submitted to the Department of Environmental Quality at the end of each calendar month. Unless otherwise agreed to by the Department of Environmental Quality, data collected and submitted shall include, but not necessarily be limited to, the following parameters and minimum frequencies:

<u>Parameter</u>	<u>Minimum Frequency</u>
Flow to river (gpd)	Daily
COD (concentration & pounds discharged)	One 24-hr. composite per week
Suspended solids (concentration & pounds discharged)	One 24-hr. composite per week
pH	Daily grab sample
Turbidity	Daily grab sample

The 24-hour composite samples shall be collected during periods of representative flow and processing, including limestone washing.

10. In the event a breakdown of equipment or facilities causes a violation of any of the conditions of this permit or results in any unauthorized discharge, the permittee shall:
  - a. Immediately take action to stop, contain and clean up the unauthorized discharges and correct the problem.
  - b. Immediately notify the Department of Environmental Quality so that an investigation can be made to evaluate the impact and the corrective actions taken and determine additional action that must be taken.

# WASTE DISCHARGE PERMIT

State of Oregon  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit Number: 1514  
Expiration Date: 1-31-77  
Page 3 of 3

- c. Submit a detailed written report describing the breakdown, the actual quantity and quality of resulting waste discharges, corrective action taken, steps taken to prevent a recurrence and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit or the resulting liability for failure to comply.

11. Authorized representatives of the Department of Environmental Quality shall be permitted access to the premises of all applicable facilities owned and operated by the permittee at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data and carrying out other necessary functions related to this permit.
12. Whenever a significant change in the character of the waste is anticipated or whenever a change in the waste to be discharged in excess of the conditions of this permit is anticipated, a new application shall be submitted together with the necessary reports, plans and specifications for the proposed changes. No change shall be made until plans are approved and a new permit issued.
13. In the event that a change in the conditions of the receiving waters results in a dangerous degree of pollution, the Department of Environmental Quality may specify additional conditions to this permit.
14. This permit is subject to termination if the Department of Environmental Quality finds:
- a. That it was procured by misrepresentation of any material fact or by lack of full disclosure in the application.
  - b. That there has been a violation of any of the conditions contained herein.
  - c. That there has been a material change in quantity or character of waste or method of waste disposal.

DEPARTMENT OF ENVIRONMENTAL QUALITY

By E. Weather  
title Director

Date July 16, 1973

**ASH GROVE CEMENT COMPANY**

P.O. BOX 03007, ST. JOHNS STATION • PORTLAND, OREGON 97203

October 30, 1973

18-2

C  
O  
P  
Y

The Water Quality Division  
Industrial Waste Section  
Department of Environmental Quality  
1234 S. W. Morrison Street  
Portland, Oregon 97205

Attention: Mr. Harold L. Sawyer  
Administrator

Gentlemen:

Re: "WASTE DISCHARGE PERMIT" - File #3690

As indicated by your letter of October 17, 1973, we would like to submit the following discussions and drawings for your consideration and evaluation towards final approval by the Environmental Quality Commission of the Ash Grove Cement Company Discharge Permit.

As outlined under Reports and Plans

- A. 1. Sources of discharge -
- a. Water is used in the water seals of our two (2) calcimatic kilns.
  - b. Water is used to wash our unprocessed limestone at the triple-deck screen located at the South-west corner of our property.

The water seal water and the limestone washer water are then combined for discharge to the river. The total combined discharge is approximately 325,000 gallons per week.

2. There are several situations which will affect the quantity of water to be discharged to the river, production being the main reason for any changes. When we have one kiln out of operation, either for repair or due to lack of sales, our discharge would



**ASH GROVE CEMENT COMPANY**

P.O. BOX 03007, ST. JOHNS STATION • PORTLAND, OREGON 97203

The Water Quality Division  
Industrial Waste Section  
Department of Environmental Quality

be approximately one half the stated figure, both from the water seal and due to the necessity of washing less limestone. Also during the Winter months when the surrounding soil is saturated by rain our discharge could possibly increase slightly.

- C  
O  
P  
Y
3. We have discussed both company wise, and with the Department of Environmental Quality, alternative methods for the reduction of our waste discharge. One of the reasons for the manner in which our settling basins have been established was the possibility that in this manner we could eliminate all discharge to the river. We have re-cycled water from our air compressors to our kiln water seals, reducing our discharge from the kiln water seal. We have also, during the dry months, (from June until the present), had no flow into the Willamette River through our settling ponds. During part of this time we were experimenting by not washing our limestone prior to its entry into the kiln, with no ill effect. We are however still in the evaluation stage due to lack of experience during inclement weather and we should have a much better picture of this situation by the first of January.
  4. At the time of our application it was not known if we would be able to eliminate 100 percent of our waste discharge, so application was made along the lines of our past discharge experience.
  5. After discussion with the Department of Environmental Quality it was felt that a minimum of 24 hours retention time of waste would be required. This is what determined the number and size of settling ponds which have been put into operation. Since the original size of these settling ponds was purposely in excess of that required for the amount of flow per week, we did anticipate having some sloughing off of the sides and ends, but these would definitely stabilize due to saturation with limestone and quicklime fines which are widely used for soil stabilization in many locations. We anticipate these settling basins being well stabilized and able to be cleaned and maintained within the first thirty (30) days after they have been filled and cleaned the first time.

**ASH GROVE CEMENT COMPANY**

P.O. BOX 03007, ST. JOHNS STATION • PORTLAND, OREGON 97203

The Water Quality Division  
 Industrial Waste Section  
 Department of Environmental Quality

C  
O  
P  
Y

6. As long as the settling basins are cleaned and maintained we do not see at this time any difficulty with their operation with respect to our waste producing processes.
  7. Since we have little or no equipment that could malfunction in this simple system we do not anticipate any emergency or accidental discharge.
  8. We expect the completed facilities to adequately handle our 325,000 gallons of discharge per week and to be able to meet the parameters of that discharge to the satisfaction of the Department of Environmental Quality.
  9. We expect to have this project completed, stabilized and in operation prior to the 31st of December, 1973.
  10. We have been able to control our discharge to no flow during the construction.
  11. We are hoping to be able to eliminate our waste discharge, however should we not be able to accomplish this we will up-grade our facility to meet necessary requirements.
- B. See attached drawing, numbered Y-600 and marked Exhibit "A". *(In envelope back of this file)*
- C. We do not have schematics at this time but should they be required we will furnish as necessary.
- D. Since we do not have any new major structures we do not have any detailed design drawings.
- E. We will forward a detailed plan of monitoring and control, including the cleaning requirements as soon as we have arrival at the laboratory and sample equipment to be used.

We do not have a maintenance problem or limitations on mechanical equipment due to having no mechanical equipment in our treatment facility.

We hope the forgoing will be adequate for your evaluation of our problem, however should additional drawings or information be necessary, please contact us.

Yours truly,

*W.A. Kistler*

WAK:fmc  
 Attachment  
 cc: R.E.W.  
 G.D.J.

January 11, 1974

6-2

Mr. Bill Leshar  
Department of Environmental Quality  
1234 S. W. Morrison St.  
Portland, Oregon 97205

Dear Mr. Leshar:

As indicated in previous correspondence, we have taken steps to minimize our waste water discharge to the Willamette River. We have not discharged water since the last part of August, and plan even lower water usage with future modifications that will help minimize or eliminate kiln seal-water effluent. Since we no longer wash our raw material (limestone), the seal-water and rain-water are the only possible sources of waste-water.

We have purchased a pH meter, and our Kansas City laboratory is equipped to run C.O.D. and suspended solids. These analytical procedures are per Standard Methods for the Analysis of Water and Waste-Water, 13th Ed. A turbidimeter for turbidity and effluent neutralization equipment have not been purchased: if effluent can be eliminated, they will be unnecessary.

Enclosed are sampling procedures, a pH procedure, weir calibration charts, and written information/data requirements sheet as compiled by Mr. Doug Reed, our Quality Control Supervisor.

The program is implemented as far as possible without waste-water being discharged.

Yours truly,

WAK:fmc

cc: G. D. J.

Enclosures

18-2

1/13/74

file #

P. O. Box 03007

97203

January 10, 1974

6-2

Mr. Bill Leshar  
Department of Environmental Quality  
1234 S. W. Morrison St.  
Portland, Oregon 97205

Dear Mr. Leshar:

As you will probably remember, we have taken steps to minimize our water discharge to the Willamette River. We have not discharged water since the last part of August, and plan even lower water usage with future modifications that will help minimize or eliminate kiln seal-water effluent. Since we no longer wash our raw material (limestone), the seal-water and rain-water are the only possible sources of waste-water.

We have purchased a pH meter, and the Kansas City lab has set up for C.O.D. and suspended solids. These analytical procedures are per Standard Methods for the Analysis of Water and Waste-Water, 13th Ed. A turbidimeter for turbidity and effluent neutralization equipment have not been purchased: if effluent can be eliminated, they will be unnecessary.

Enclosed are sampling procedures, a pH procedure, weir calibration charts, and written information/data requirements sheet.

The program is implemented as far as possible without waste water being discharged.

Yours truly,

Douglas A. Reed  
Production Supervisor

DAR:fmc

cc: W. A. K.

Enclosures (4.)

18-2

ASH GROVE CEMENT COMPANY  
13939 N. Rivergate Blvd.  
Portland, Oregon 97203

Monitoring Results For \_\_\_\_\_  
(Month & Year)

<u>DATE</u>	<u>FLOW</u>	<u>pH</u>	<u>TURBIDITY</u>	<u>C.O.D.</u>	<u>SUSPENDED SOLIDS</u>
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Flow - 325,000 Gal/Week  
pH - 6.0 - 9.0  
Turbidity -  
C.O.D. - 45#/Day  
Suspended Solids -  
375#/Day

FREQUENCY

Flow - Daily  
pH - Daily Grab  
Turbidity - Daily Grab  
C.O.D. - 24 Hour/  
Comp. Week  
Suspended Solids -  
24 Hour/  
Comp. Week

Signed \_\_\_\_\_

Wier Calibration  
High range

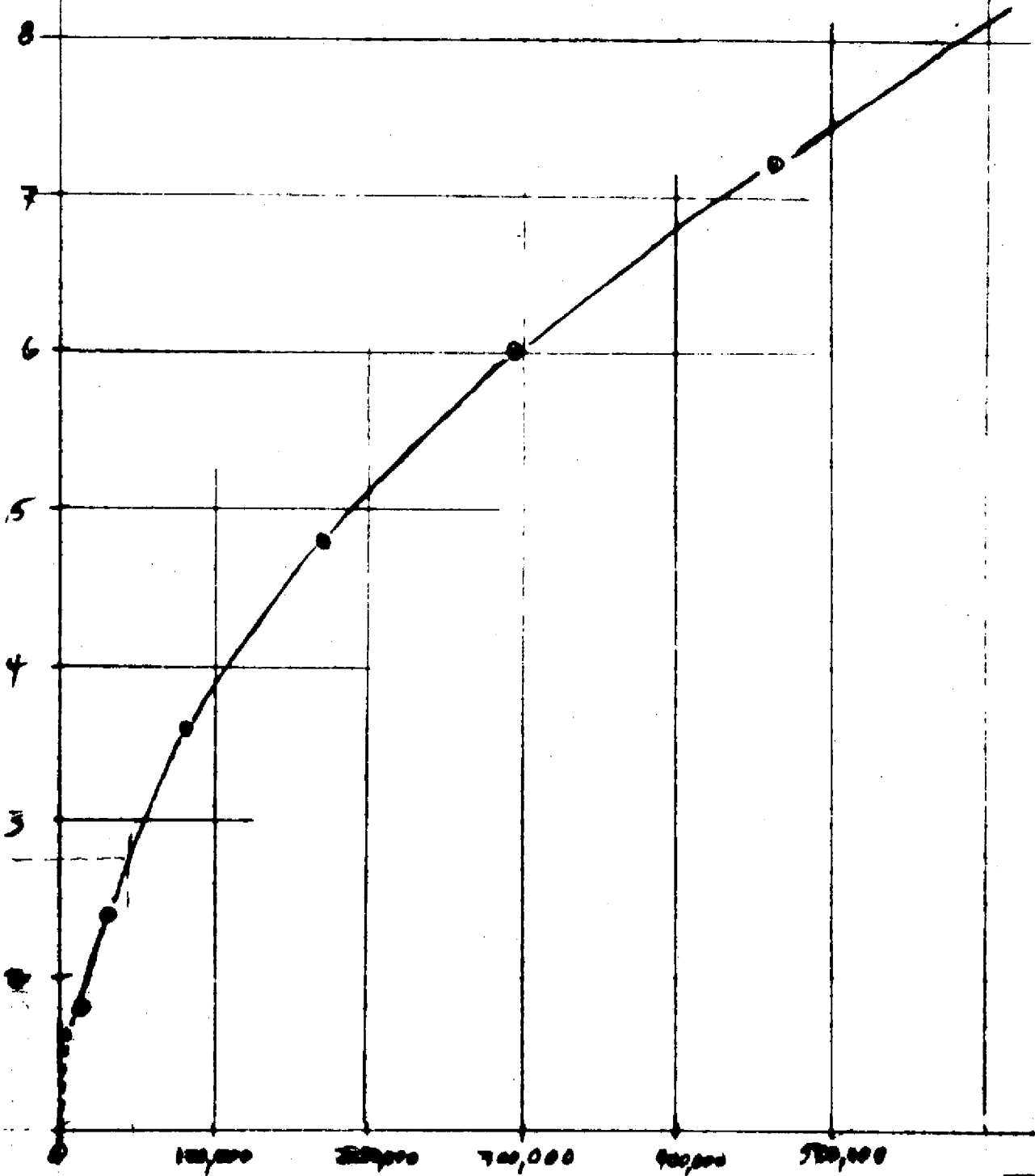
inches of water flowing

daily limit

ON CLEARPRINT 100G F

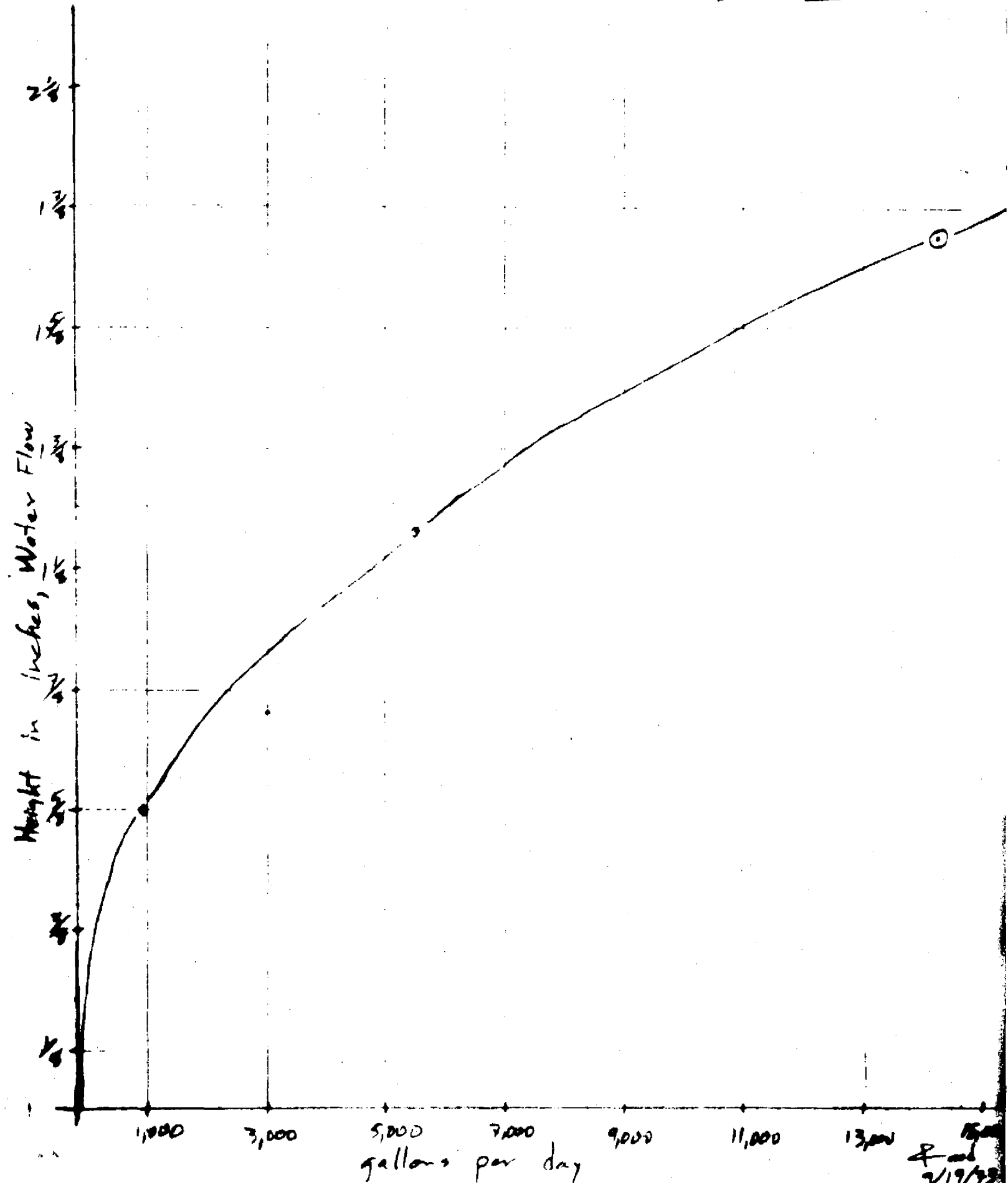
gpd

End  
9/2/75



# Weir Calibration

Low range



# WATER SUPPLY-ORIFICES & WEIRS

## DISCHARGE OVER 90° TRIANGULAR V NOTCH SHARP-CRESTED WEIR\*

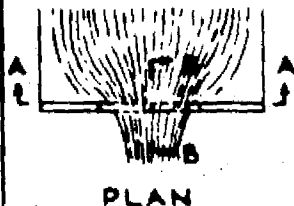
(COMMONLY USED WHERE FLOWS ARE SMALL.)

Thompson Formula

$$Q = 2.54 H^{3/2}$$

For general notes see drawing of rectangular weir.

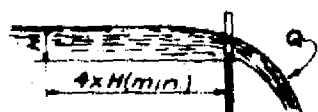
Q = Discharge in cu ft. per sec.  
H = Head in feet.



PLAN



SECTION A-A



SECTION B-B

H IN FEET	H IN INCHES	Q IN CU. FT. PER SEC.
0.05	5/8	0.0015
0.10	1 1/8	0.0085
0.15	1 3/8	0.022
0.20	2 1/8	0.047
0.30	3 3/8	0.129
0.40	4 3/8	0.262
0.50	6 1/8	0.455
0.60	7 1/8	0.714
0.70	8 3/8	1.044
0.80	9 3/8	1.452
0.90	10 3/8	1.943
1.00	12	2.520
1.10	13 3/8	3.189
1.20	14 3/8	3.954
1.30	15 3/8	4.818
1.40	16 3/8	5.785
1.50	18	6.860

## DISCHARGE PER FOOT OF WEIR WIDTH OVER CIPOLLETTI WEIR\*

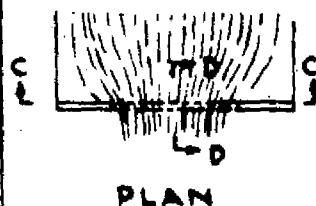
(COMMONLY USED WHERE END CONTRACTION CONDITIONS EXIST)

Cipolletti Formula

$$Q = 3.367 L H^{3/2}$$

For general notes see drawing of rectangular weir.

Q = Discharge in cu ft. per sec.  
L = Width of weir in feet.  
H = Head in feet.



PLAN

Slope 1-Hor. to 4-Vert.



SECTION C-C



SECTION D-D

H IN FEET	Q IN CU. FT. PER FT. OF WEIR	H IN FEET	Q IN CU. FT. PER FT. OF WEIR
0.1	0.107	1.6	6.814
0.2	0.301	1.7	7.462
0.3	0.553	1.8	8.130
0.4	0.852	1.9	8.817
0.5	1.190	2.0	9.522
0.6	1.565	2.1	10.245
0.7	1.972	2.2	10.986
0.8	2.409	2.3	11.743
0.9	2.875	2.4	12.517
1.0	3.367	2.5	13.308
1.1	3.884	2.6	14.114
1.2	4.426	2.7	14.936
1.3	4.990	2.8	15.774
1.4	5.577	2.9	16.626
1.5	6.185	3.0	17.494

## DISCHARGE THROUGH AN ORIFICE OR TUBE

Diagram	Description	Average discharge coefficient $C_d$	Diagram	Description	Average discharge coefficient $C_d$
	<b>SHORT TUBE OR ORIFICE IN THICK WALL WITH SQUARE-EDGED ENTRY</b> When the stream springs clear from the tube at the upstream corner the flow is the same as for a sharp-edged orifice.	0.61		<b>SHARP-EDGED ORIFICE</b> The stream is contracted to about 63% of the area of the opening.	0.61
	<b>RE-ENTRANT TUBE</b> Length about 2 1/2 diameters. Flange full.	0.70		<b>ORIFICE WITH WELL-BOUNDED ENTRY</b> There is little or no contraction and the stream is about the same size as the opening.	0.98
	<b>RE-ENTRANT TUBE</b> When the length is about one diameter it is called "Randa's Mouthpiece". Stream springs clear of the walls of the tube.	0.91		<b>SHORT TUBE OR ORIFICE IN THICK WALL WITH SQUARE-EDGED ENTRY</b> When flowing full. When the length of the tube is 4 diameters it is called a "standard short tube".	0.82

H = Head in ft. in center of orifice  
Q = Discharge in cu ft.  
Orifice Formula.  
 $Q = C_d A \sqrt{2gH}$   
A = Area of orifice in sq. ft.  
 $C_d$  Discharge coefficient.  
 $C_d = 0.61$

\*Adapted from Handbook of Water Control by the California Corrugated Culvert Co.



pH DETERMINATION  
OF AQUEOUS SAMPLES

I Equipment

- A. Model 3 Corning pH meter.
- B. Clean glass beakers.
- C. Buffers.
  - 1. 0.050 M Potassium Acid Phthalate, 10.212 g/l; pH = 4.005 at 25° C. AR.
  - 2. 0.025 M Disodium Hydrogen Phosphate, 3.548 g/l; pH = 6.860 at 25°C. AR.
  - 3. 0.01M Sodium Borate, 2.013 g/l; pH = 9.177 at 25°C. AR.
- D. Electrode for pH Meter.
  - 1. Ascertain that it is filled with saturated KCl/AgCl to the proper level.
  - 2. Maintain by soaking in D.I. water.

II Procedure

- A. Turn on meter twenty minutes before using.
- B. Set temperature knob at the temperature of the solution to be measured.
- C. Calibrate using the standard pH solutions.
  - 1. Set at 9.12 pH using the Sodium Borate buffer. Rinse.
  - 2. Check linearity using disodium hydrogen phosphate buffer. pH should be 6.8 to 7.0. If the pH falls in this region, write linearity O.K. in the lab book. If out of this range, notify supervisor.

cont'd. - - -

II Procedures cont'd. - - -

NOTE: Technique:

- a. Successive portions of fresh buffer solution are used until pH reading stays the same between two successive changes of buffer solution
  - b. Stir solutions on stir-plate while determining pH.
  - c. Rinse the electrodes and beakers carefully with D.I. water after each measurement.
  - d. The electrodes should be rinsed with water, Potassium Acid Phthalate buffer, and then more D. I. water after each pH determination above pH 8. Discard rinse solutions after use.
- D. Measure and record the pH of the solution to be tested after the probe stabilizes in the solution (pH reading stops changing).
- E. Turn off meter after testing is completed, and place lower half of probe in D. I. water.

Douglas A. Reed

## WRITTEN INFORMATION/DATA

### I Sample labels per ASTM D 1192

#### Record:

- a) Date and time of sampling.
- b) Source of sample.
- c) Point of Sampling.
- d) Sample temperature.
- e) Flow rate.
- f) Signature of sampler.

### II Test Results:

#### Reporting.

- a) Water quality notebook.  
Record test date, label data per I above, and test results. Allow space for later entry of COD and Suspended Solids results from Kansas City lab, on Thursdays.
- b) Monitoring results sheet.  
This is filled out, in full, on a daily basis by sample date.

### III The NPDES report is filled out after the end of each month, and filed by the 15th of the following month.

Douglas A. Reed

## SAMPLING

### I Equipment:

- A. 500 ml Nalgene polyethylene bottles and lids.
  - 1. Wash after each use with soap, water, and bottle brush.
  - 2. Rinse thoroughly, finishing with DI water.
  - 3. Drain water, then cap.
  - 4. Remove old label and apply a blank one.
- B. Label.

### II Locations:

- A. Water passing through V-notch in weir.
- B. At the river bank 10 feet up-current and 100 feet down-current from where the discharge flows into the Willamette River.

### III Frequency:

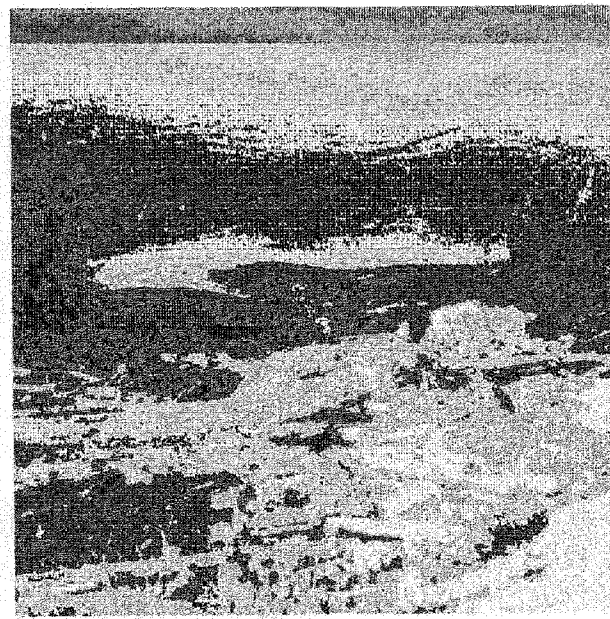
- A. Daily - pH, turbidity, and flow rate are determined and recorded (river-pH only).
- B. Weekly - C.O.D. and suspended solids are determined on an equi-volume composite of three (3) samples taken at 8:00 A.M., 4:00 P.M., and 12:00 P.M. on Thursdays.

Douglas A. Reed  
1-10-74

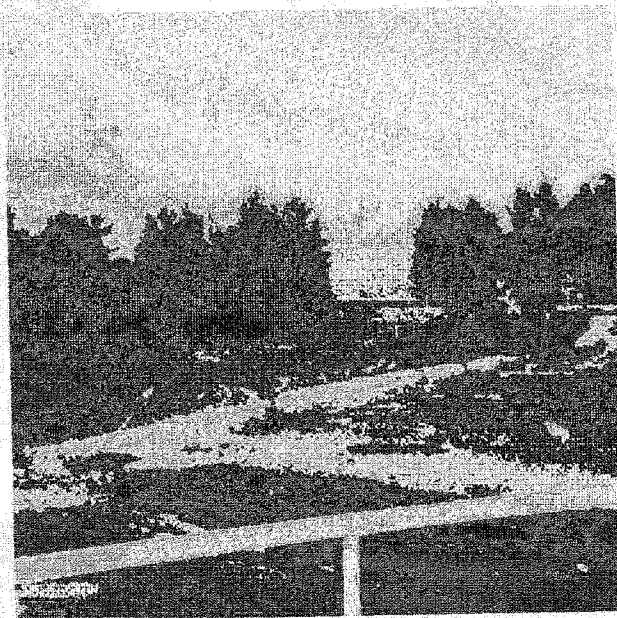
DAR:fmc



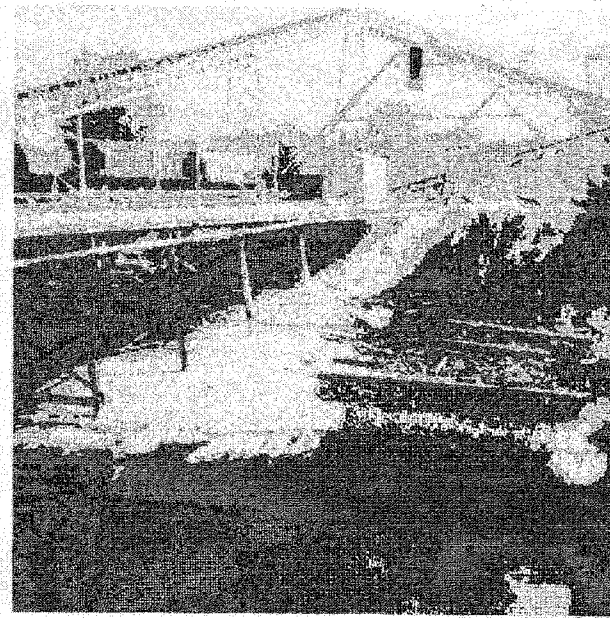
OUTFALL PIPE  
FOR KILN COOLING  
WATER



ROCK WASHING WATER  
TRICKLING DOWN BANK  
INTO RIVER



MATERIAL WE HAVE  
DUMPED INTO RIVER AT  
WEST PROPERTY LINE



VIEW OF LIME SPILLAGE  
ON WATERFRONT -  
NOTE DEBRIS

# ASH GROVE CEMENT COMPANY



WESTERN REGION  
13939 NORTH RIVERGATE BLVD., P.O. BOX 83007  
PORTLAND, OREGON 97283-0007  
PHONE 503-286-1677

WILLIAM A. KISTLER  
PLANT MANAGER

June 11, 1992

Mr. George Davis of Oregon Department of Environmental Quality, was here at 3:15 P.M., to investigate a complaint they had received regarding what appeared to be spillage at our dock.

Mr. Davis was shown our dock area and we discussed our unloading and the spillage that would have been limestone only  $\text{CaCO}_3$  and he returned to his office. He said we would not receive a report of his visit

W.A. Kistler





# Ash Grove Cement Company

## Evaluation of Wastewater Discharge Options

PREPARED FOR: Bob Vantuyl, Ash Grove Cement Company  
Glenn Dollar, Ash Grove Cement Company

PREPARED BY: Raj Kapur/CH2M HILL

DATE: October 25, 2001

### Introduction

Ash Grove Cement Company (Ash Grove) recently submitted an application to Oregon Department of Environmental Quality (DEQ) for renewing its National Pollutant Discharge Elimination System (NPDES) Permit. While Ash Grove has a NPDES permit that allows the discharge of wastewater generated at its Rivergate facility, a discharge of wastewater to the Willamette River would occur only during extreme circumstances. Under normal operating conditions, most of the wastewater is collected and land applied on an adjacent field. Eventhough the NPDES permit renewal application submitted to DEQ in 1996 stated that wastewater was being land applied, the NPDES permit for the facility does not specify land application as a method of wastewater disposal.

Since the NPDES permit does not specify land application as a method of discharging wastewater, Ash Grove is assessing the feasibility of getting this discharge method permitted. In addition, Ash Grove is also considering other discharge options for the wastewater generated at the Rivergate facility. The following options are being considered:

- Discharge to Willamette River (NPDES Permit)
- Discharge to land application system (Water Pollution Control Facilities (WPCF) Permit)
- Discharge to City of Portland sanitary sewer
- Recycle/reuse/evaporation of wastewater (no wastewater permit)

This draft Technical Memorandum describes and evaluates these disposal options on the basis of its permitability and cost. This draft document has been developed to allow Ash Grove to assess the feasibility and relative costs of engineering solutions and to assist in focusing a detailed evaluation of wastewater disposal options. It should be noted that the costs presented are an order of magnitude estimate with an expected accuracy of +50%/-30%.

### Description of Options

The following is a description of the disposal options, permitting requirements and regulatory implications of implementing each option.



---

## **Discharge to Willamette River**

A discharge to the Willamette River on a routine basis will require renewal of the current NPDES permit. Since a sample of the effluent was not analyzed as part of the NPDES permit renewal application, DEQ may require further analysis of the discharge before processing the NPDES permit application. Installation of a neutralization system may be necessary to ensure that the discharge is able to consistently meet effluent limits. Before developing the renewed NPDES permit, DEQ is requesting the submittal of a Temperature Management Plan (TMP). DEQ is requiring that a TMP be developed if the discharge is expected to exceed the 68°F temperature criteria for the Willamette River. Currently, effluent temperature data is not available. For the purpose of this evaluation, it is assumed that Ash Grove would need to submit a TMP. Depending on the discharge temperatures and mixing conditions, DEQ may require a reduction in the amount of heat discharged by the facility as part of the TMP.

Once the permit is renewed, it will likely maintain the current effluent limits for suspended solids and pH. In addition, the permit may include effluent limits and/or monitoring requirements for additional parameters (temperature & turbidity).

Section 303(d) of the Clean Water Act requires each state to develop a list of water bodies that do not meet state surface water quality standards after implementation of technology-based controls. The state is then required to complete a Total Maximum Daily Load (TMDL) program for water bodies on the 303(d) list. The TMDL program must address water quality on a basin-wide scale to ensure that overall water quality standards will be met. The segment of the Willamette River, where Ash Grove would discharge, is listed as not meeting water quality standards for temperature, bacteria, mercury and biological criteria. DEQ is planning to complete the Willamette River TMDL by the end of 2003. The TMDL may result in additional limitations and/or monitoring requirements in Ash Grove's NPDES permit.

## **Discharge to Land Application System**

Collecting and land applying all wastewater on the adjacent field will require a Water Pollution Control Facilities (WPCF) permit. Unlike the NPDES permit which is issued under the Federal Clean Water Act, the WPCF permit is issued under state statutes. In order for DEQ to permit land application system, modifications to the existing system are probably necessary. This will likely include the installation of application system to evenly distribute water over the field. Installation of a neutralization system may be necessary to ensure that the wastewater that is land applied meets defined characteristics.

Hydrogeologic characterization and groundwater monitoring may be required especially if water is being applied at a rate greater than the agronomic rate and/or groundwater levels in the area are high.

Another possibility is that land application period may be limited to the dry weather months (May - October). If land application is limited to dry weather months, then Ash Grove will need to consider other alternatives during the wet weather months (November - April). Alternatives include recycle/reuse, storing water during wet season, discharge to surface waters, or discharge to sanitary sewer.

## Discharge to Sanitary Sewer

With the construction of the new sewer line, Ash Grove could discharge the wastewater generated at the facility to the City of Portland's sanitary sewer. The expected discharge rate was assumed to be equal to the total amount of water that is currently being directed to infiltration (178,000 gallons per day (gpd)). Since the discharge rate is greater than 25,000 gpd, it is likely that Ash Grove will be identified as a Significant Industrial User (SIU) and will need to obtain a sewer discharge permit from the City. The permit application cost is approximately \$4,000. Note that this does not include costs for conducting additional monitoring required by the permit application. The City would also assess a flow charge of \$4.24/100 cubic feet/day for use of the sewer system. For the expected discharge rate of 178,000 gpd, the flow charge for use of the sewer system would be approximately \$1,000/day. In addition, system development charges may apply if the sewer line that was constructed is not capable of handling the expected flows. pH adjustment is assumed to be the only treatment that would be required prior to discharge to the City sewer.

## Recycle/Reuse

Ash Grove is also exploring the possibility of installing recycle/reuse/evaporation systems for some of the large wastestreams. Approximately 100,000 gpd of wastewater are generated from the lime kilns. Ash Grove has explored the possibility of installing an evaporative cooling system to evaporate the wastewater generated at the kilns. Another major source of wastewater is the truck wash. Ash Grove is considering the installation of a wastewater collection, treatment and reuse system for the truck wash. There are additional minor sources of water which would need to be collected and reused to eliminate the need to obtain a NPDES or WPCF permit for the facility.

## Cost Estimates

### Discharge to Willamette River

The following is a preliminary estimate of potential costs associated with discharging to the Willamette River on a regular basis. The costs are an order of magnitude estimate with an expected accuracy of +50%/-30% and are presented primarily for comparative purposes.

Table 1

Activity	Cost
Monitoring of additional pollutants for NPDES permit application	\$2,000
Installation of neutralization system for entire wastestream	\$30,000
Development of a temperature management plan	\$15,000
Implementation of potential heat load reduction options	???
Additional limits and/or monitoring requirements under Willamette River TMDL	???

Note that with the upcoming Willamette River TMDL and implementing a temperature management plan, heat load reductions may be necessary. At this point, the extent of heat load reductions that may be required by the permit, if any, are not known. Therefore, estimates shown above do not include these potential costs. As a result, there are uncertainties associated with discharging to the Willamette River. It should also be noted that this option does not present costs for routine monitoring and reporting required by the NPDES permit as well as the cost of any studies that may need to be undertaken (i.e. mixing zone evaluations, biological assessments, whole effluent toxicity testing, etc.).

### Discharge to Land Application System

The following is a preliminary estimate of the costs associated with discharging to a land application system. The costs are an order of magnitude estimate with an expected accuracy of +50%/-30% and are presented primarily for comparative purposes.

**Table 2**

Activity	Cost
Installation of a irrigation system	\$5,000
Installation of neutralization system for entire wastestream	\$30,000
Hydrogeologic characterization and groundwater well construction (3 wells)	\$50,000
Implementation of other alternatives if land application is not allowed on a year-around basis	????

Costs associated with obtaining a WPCF permit from DEQ are not included because it is assumed that the NPDES permit renewal fees paid by Ash Grove would be applied to the WPCF permit. The costs presented above does not include the routine monitoring that would be required by the WPCF permit. Furthermore, selection of this alternative will necessitate implementation of another alternative (i.e. Willamette River discharge, sanitary sewer discharge, recycle/reuse or storage), if land application is not allowed on a year-around basis.

### Discharge to Sanitary Sewer

The following is a preliminary estimate of costs associated with discharging to the City of Portland's sanitary sewer.

**Table 3**

Activity	Cost
Installation of neutralization system for entire wastestream	\$30,000
Permit fees	\$4,000
Flow charge based on 178,000 gpd	\$1,000/day
System development charges	????

---

The costs presented above assume that the primary pollutant of concern is pH and elementary neutralization is the only treatment required prior to discharge to the City sewer. As mentioned above, system development charges may apply if the sewer line that was constructed is not capable of handling the expected flows.

## Recycle/Reuse

The following is a preliminary estimate of costs associated with the two primary wastestreams: lime kilns and truck wash. The costs are an order of magnitude estimate with an expected accuracy of +50%/-30% and are presented primarily for comparative purposes.

**Table 4**

Activity	Cost
Evaporative cooling system	\$30,000
Truck wash recycle system	\$30,000
Other minor wastestream	???

To implement this option without triggering the need for permits, it is also necessary to collect and reuse water from minor wastestreams. It is a cost that should be considered, however, it is difficult to quantify at this time.

## Conclusions

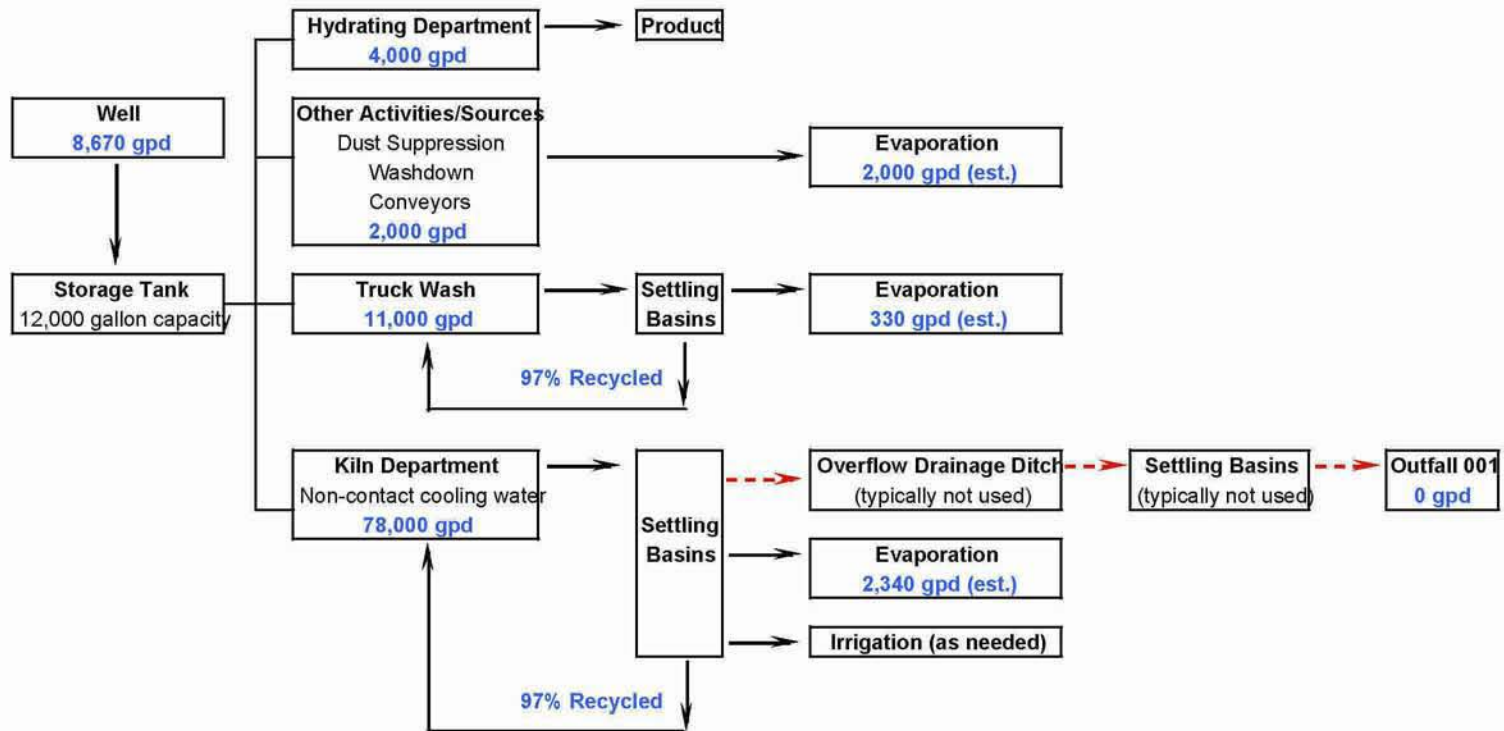
Based on the preliminary costs presented above, collecting, treating, and discharging the entire wastestream to the sanitary sewer appears to be the most expensive option with a large recurring cost. Therefore, this option is not considered further.

The viability of discharging to a land application system is largely dependent on whether land application is allowed on a year-around basis. If land application is not allowed on a year-around basis and another option needs to be implemented to deal with wastewater during the wet weather period, then this option is not very attractive.

Discharging to the Willamette River appears to be a viable option, however, costs associated with on-going monitoring/reporting, the potential for capital expenditure to reduce heat load discharged by the facility, and the impending Willamette River TMDL, make this option less attractive.

Installation of a recycle/reuse system appears not only to be a cost effective alternative but one that would not require a NPDES or WPCF permit. In order to implement this option without triggering the need for these permits, it is necessary to ensure that minor wastestreams are collected and reused. Prior to selecting this alternative, an engineering study should be conducted to assess the implementability of this alternative.

**Schematic of Water Flow**  
**Rivergate Lime Plant**  
**Ash Grove Cement Company**  
**Portland, Multnomah County, Oregon**





## MEMORANDUM

To: Glen Dollar

Date: February 24, 2006

From: Michael Rounds & Alistaire Clary

Project: Ash Grove Cement/0168.01.02

RE: Rock Sump Assessment

At your request, Maul Foster & Alongi, Inc. (MFA) conducted an evaluation of four rock sumps near the Ash Grove facility at 2600 N. River Street, Portland, OR. MFA obtained a base map from Westmar Consultants (see Figures 1 and 2) and reviewed a survey of the facility from Caswell/Hertel Surveyors Inc. dated September 26, 2005. MFA spoke with Bob White at Caswell/Hertel to clarify assumptions made during the survey and pinpoint the location of the property line. In addition, MFA reviewed past reports and maps provided by Goldendale Aluminum and CH2MHill to assess the approximate location and discharge points of the rock sumps.

Alistaire Clary and Michael Rounds of MFA conducted a site visit to assess site conditions on January 31, 2006. In addition, MFA subcontracted with Locates Down Under Inc. to determine the direction and length of five outfalls (#1, #2, #3, #7, and #8) as depicted on the attached figures. Locates Down Under Inc. conducted the utility locate on February 3, 2006 with MFA staff present. An attempt was made to TV the 10" line and the 6" line running from the catch basin at the north corner of the rail car load out building (see figure 2). The iron grate began to crack and the work was stopped before significant damage occurred to the grate. Michael Rounds conducted a second site visit on February 16, 2006 to document the results of the utility locate.

### Findings

Former Goldendale Aluminum employees have indicated that the rock sumps do not discharge to the Willamette, but rather infiltrate into the groundwater aquifer. However, a historical map dated December 2000 provided by Goldendale Aluminum show each rock sump connected to a separate outfall to the Willamette River (see Figure 3). The four rock sumps are shown on the Goldendale Aluminum map as being east of the fence along River Street. Another map dated March 2000 by CH2MHILL shows two rock sumps west of the fence between the rail lines at the rail car movers north and south of the load out building and two rock sumps east of the fence (see CH2MHILL figure 2-2) The March 2000 map shows all four rock sumps connected to outfalls. However, a map dated December 2001 by CH2MHill shows only the two rock sumps west of the fence. (see CH2MHILL figure 3) The December 2001 map shows at least one of the rock sumps discharging to the main outfall #4 for the site (see figure 2). Site visits showed no evidence of rock sumps at the locations west of the fence as indicated on the CH2MHill maps. *not all*  
*Describe pipes that go to river from sumps.*

The survey from Caswell/Hertel indicates a rock sump located upstream of outfall #1 (see figure 1). Bob White at Caswell/Hertel stated that the designation as a rock sump was assumed and is not based on any in depth research. Bob also indicated that the property line generally follows the fence

line, but the property line in the north end of the facility is approximately 10' east of the fence line along River Street and is indicated on the survey map by 5/8" iron rods (see Figures 1 and 2).

Outfall pipes are currently visible along the bank of the site. Locates Down Under Inc. conducted a utility locate on five outfalls (#1, #2, #3, #7, and #8) as shown on figures 1 & 2. All five storm drains were determined to run to points outside the facility fence line as marked on the attached figures. A summary of findings for each of the outfalls upstream direction and where the signal was lost is below.

**Outfall #1:** The 12" Corrugated Metal Pipe (CMP) runs <sup>or inside</sup> northeast from the outfall and across the property. The signal was lost approximately 6 feet outside the fence line. Based on survey information, this endpoint may lie inside the property line (see figure 1).

*down road - clear work access manhole*  
**Outfall #2:** The 30" CMP storm drain runs northeast from the outfall, through a manhole located on Ash Grove property to a manhole located outside the fence line ~~and appears to be outside the~~ property line. This line is a storm drain from the adjacent Union Pacific Railroad (UPRR) property. UPRR maintains an easement on the line. Details regarding this easement may be found in the Multnomah County Easement Record (book 68, pages 362-367; June 9<sup>th</sup> 1984).

**Outfall #3:** The 12" CMP runs northeast from the outfall and across the property. The signal was lost approximately 2 feet outside the fence line and appears to be outside the property line.

*Drum ss 4*  
**Outfall #7:** The 8" CMP runs east along the north silo to the edge of the concrete pad and then bends in a northeast direction. The storm drain appeared to end at the water valve box outside the fence line. The line appears to run parallel to the water line and may be connected to the valve box. The valve box should be drained and investigated to determine whether the line is connected to the valve box.

**Outfall #8:** The CMP runs northeast from the outfall under the south silo, across the property and the signal was lost approximately 3 feet outside the fence line and appears to be outside the property line.

### Summary

*originate from*  
MFA has determined that outfalls labeled as #1, #2, #3, #7, and #8 all lead to points outside the Ash Grove Loading facility fence line. All the storm drains appear to leave the property <sup>except</sup> for the storm drain associated with outfall #1 (see figure 1). The existence of rock sumps was undetermined, but it is assumed that four rock sumps are located outside the fence line where each of the storm drain signals end. Stormwater from the Ash Grove facility does not flow toward the rock sumps or the UPRR property with the exception of the downspout from the Rail Car Load Out Building that discharges into the nearby catch basin and stormwater flowing from the paved surface between the rail line and the fence east of the south silo (see figure 2). Stormwater at both locations should be rerouted and contained on site.



MFA recommends that pipeline video location be used to determine the distance and direction of the 10" and 6" drain lines running from the catch basin at the north corner of the Rail Car Load Out building (see CB in figure 2). The location of these lines should be found to determine whether stormwater from the Ash Grove property enters this drainage system. The line apparently leading from Outfall # 7 to the water valve box should be investigated. The valve box should be drained and inspected to determine if the line is connected to the valve box. Ash Grove may want to conduct a pipeline video of the drainage system connected to Outfall #4 to determine where stormwater is entering into the line.

MFA has coordinated with Westmar Consulting to request that the utility locate markings for each storm drain are surveyed as part of ongoing services provided by Westmar.

Attachments: Figure 1, 2 and 3  
Limitations  
CH2M Hill Figure 2-2  
CH2M Hill Figure 3

cc: Robert Vantuyl Jr.

## LIMITATIONS

---

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

**Figure 1  
Outfalls**

**Ash Grove Cement Co.  
Portland, Oregon**

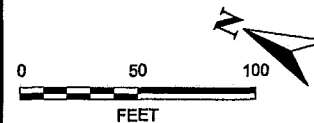
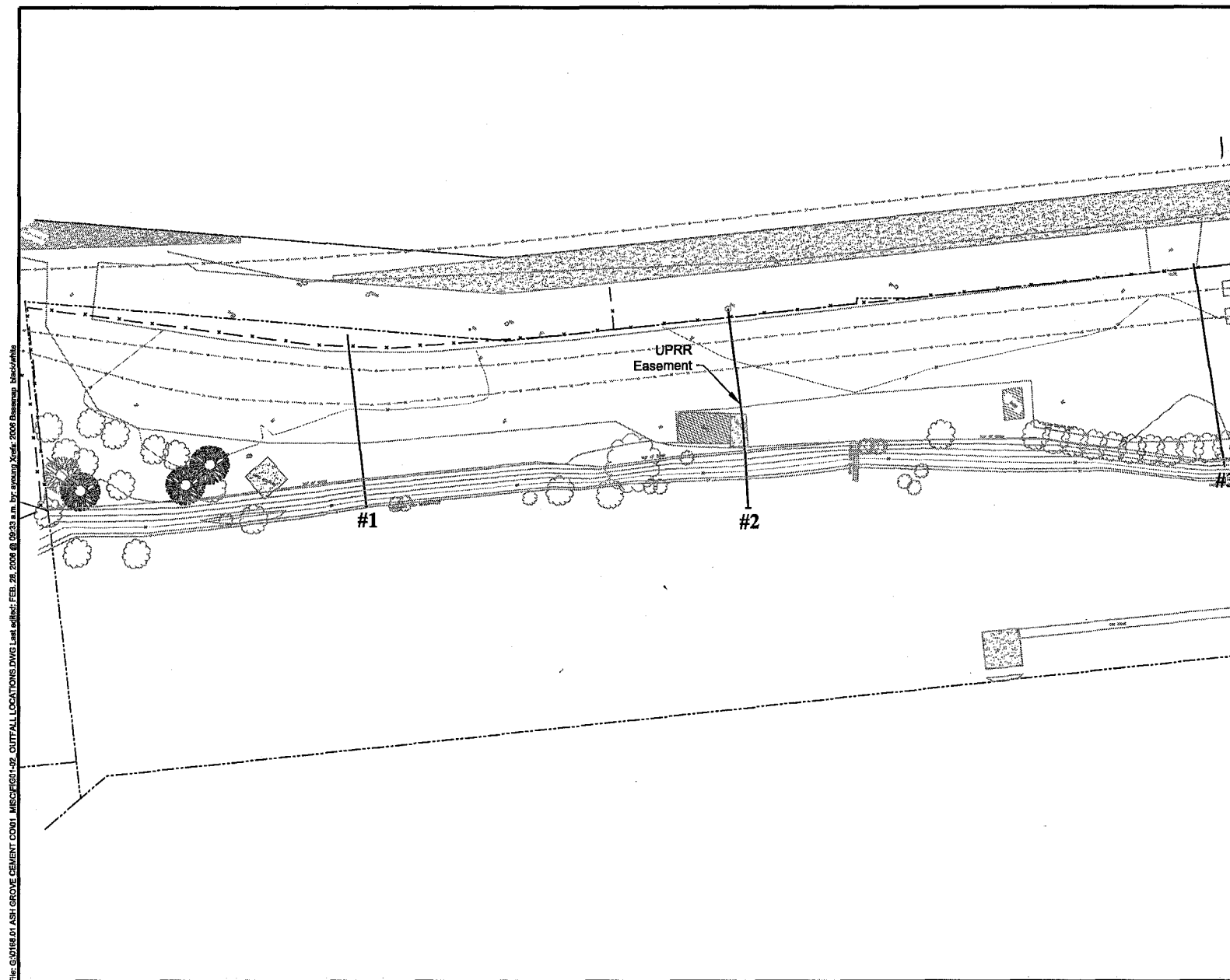
**Draft**

**Legend:**

Property Boundary

Fence

Stormwater lines by utility  
locate 02/03/06 by  
Locates Down Under.  
Locations are  
approximate and are not  
surveyed.



**MAUL  
FOSTER  
ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA 1 Portland, ME 1

FILE: G:\188.01 ASH GROVE CEMENT CO\1 MISCELL-02 OUTFALL LOCATIONS.DWG Last saved: FEB 28 2008 @ 09:23 a.m. By: gyoung Xref: 2008 Basecamp Backfiles

**Figure 2  
Outfalls**

**Ash Grove Cement Co.  
Portland, Oregon**

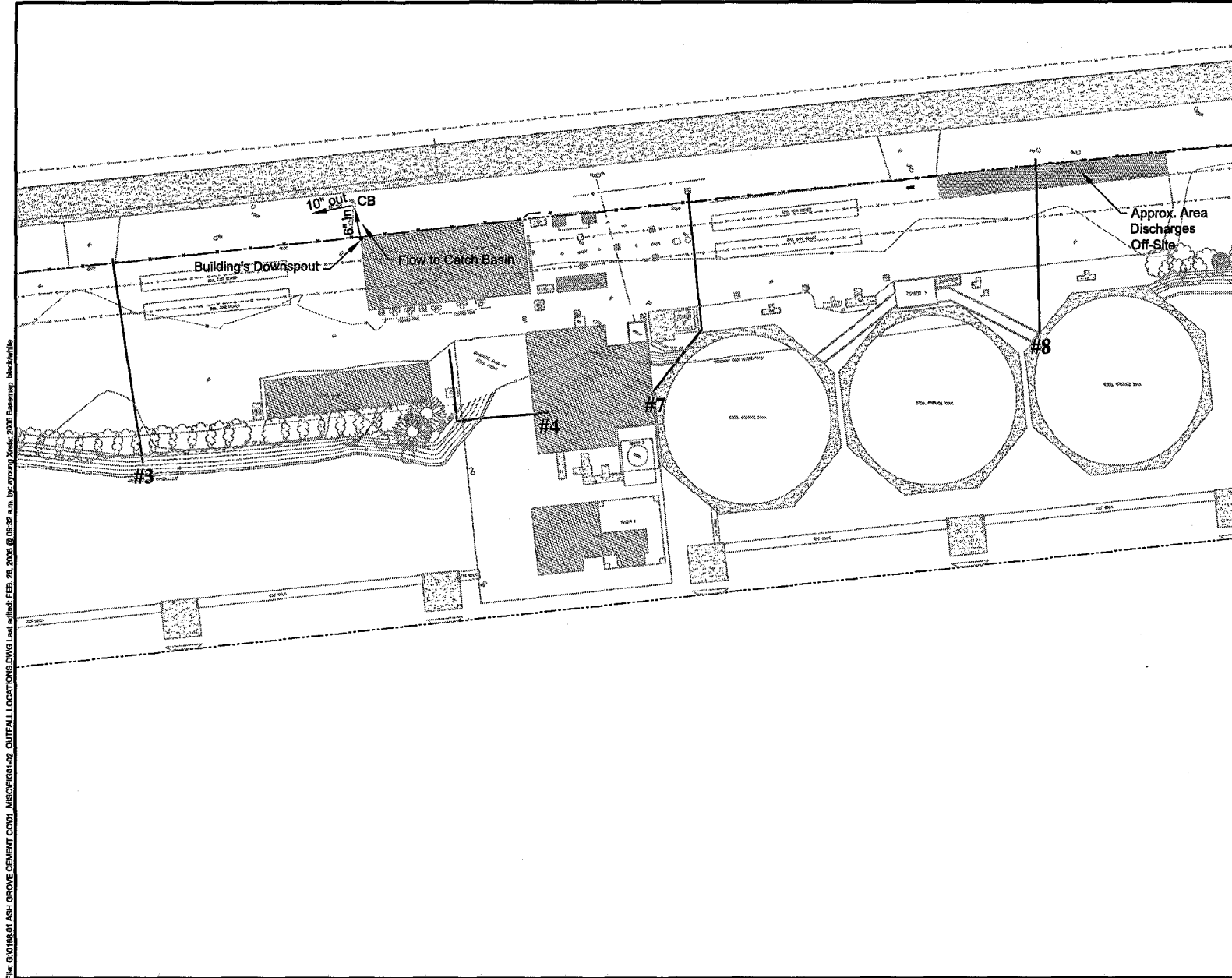
**Draft**

**Legend:**

Property Boundary

Fence

Stormwater lines by utility  
locate 02/03/06 by  
Locates Down Under.  
Locations are  
approximate and are not  
surveyed.



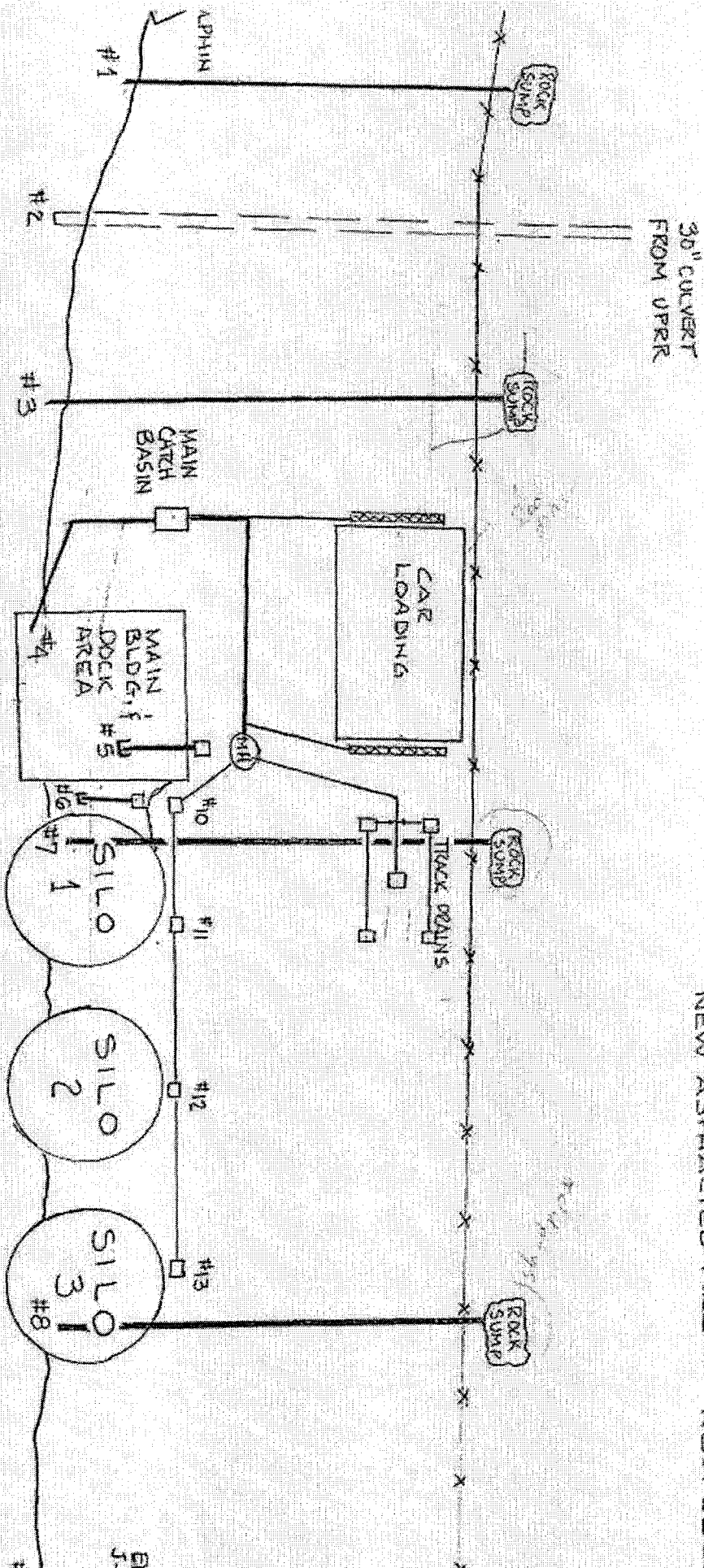
File G:0168.01 ASH GROVE CEMENT CO.01 MICROPIG-02 OUTFALL LOCATIONS.DWG Last edited: FEB 28, 2006 @ 09:22 a.m. by: young, Xander 2006 Basemap: black/white

0 50 100  
FEET

**MAUL  
FOSTER  
ALONGI INC.**

ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Tacoma, WA | Portland, OR | www.mfa-inc.com

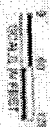
- NOTES:
- 1) #5 & #6 DRAINS CAPPED & PLUGGED NOV. 2
  - 2) #10, #11, #12, #13 ADDED TO CATCH RUNOFF NEW ASPHALTED AREA. NOV. 2006



REVISED 12/4/00 BY D. KANNARD  
 RE DRAWN 9/28/05 BY B. PALMER

OUTFALL DRAIN PLAN  
 Figure 3

WAC 4 2000



- LEGEND**
- 1. Existing
  - 2. Added/Improved
  - 3. Gravel Surface
  - 4. Property Line
  - 5. Easement
  - 6. Other Area
  - 7. Storage Area
  - 8. Storage Area (Existing)
  - 9. and beyond Station
  - 10. Station (Existing)
  - 11. Proposed Storage Area

WILLAMETTE RIVER

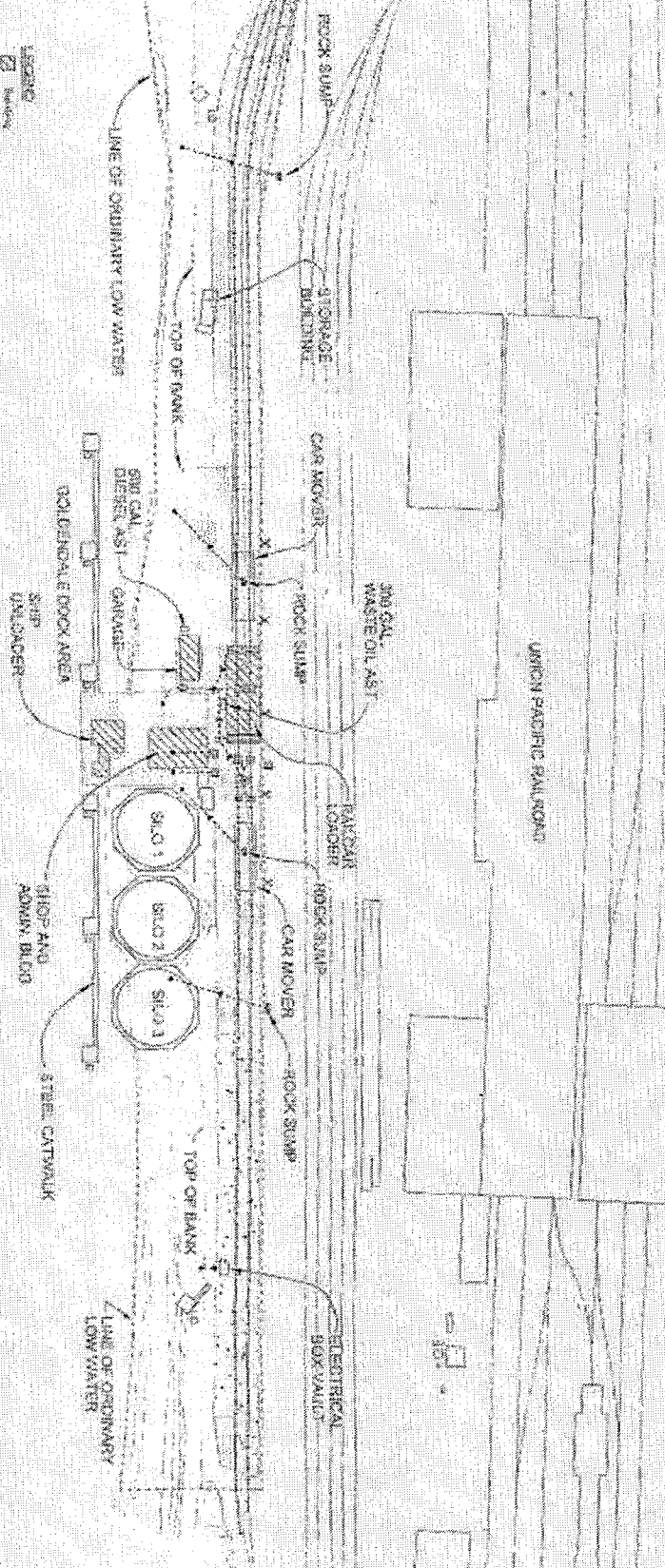


Figure 2.2  
FACILITY MAP  
GO. DENVER ALUMINUM COMPANY  
ALUMINA UNDOCKING FACILITY  
PORTLAND, OREGON

CH2MHILL





## Unknown

---

**From:** Bob Vantuyl  
**Sent:** Monday, March 06, 2006 2:11 PM  
**To:** John Hone  
**Subject:** FW: Maul Foster Update

---

**From:** Glenn Dollar  
**Sent:** Wednesday, March 01, 2006 1:15 PM  
**To:** Bob Vantuyl  
**Cc:** Gary Wright  
**Subject:** Maul Foster Update

I had a conversation with Michael Rounds and Alistare Clary with Maul Foster today concerning the Rock Sump Assessment report dated 2/24/06 and Alistare Clary's follow-up report from 2/28/06. We need to explore the rock sump that has the two lines extending from it in order to proceed further. It's assumed that the terminal may be connected to the six inch line and if so we may want to disconnect in order to not be associated with these rock sumps in the future. In order to do that we need to know what we have that's feeding into this sump. I would also like to explore the other sump located near outfall #8 that we have located. We can do this at the same time. Maul Foster thinks this would take a couple of hours of a locate services time. I would also like to explore outfall #1. In the report the line just ended on our property and we are not sure at this time what the line is connected to. It may be a manhole or some kind of catch basin. We could have a worker from the terminal dig with a backhoe or a shovel to see what is at the end of this outfall. The location where the line ended was marked for exploring by the locate service.

Glenn F. Dollar  
Environmental, Health & Safety Manager  
Ash Grove Cement Company  
Rivergate Lime Plant  
13939 N Rivergate Blvd.  
Portland, OR 97203  
E-Mail: [Glenn.Dollar@ashgrove.com](mailto:Glenn.Dollar@ashgrove.com)  
Phone: 503-286-1677  
Fax: 503-289-2272





ENVIRONMENTAL & ENGINEERING CONSULTANTS

7223 NE Hazel Dell Avenue, Suite B | Vancouver, Washington 98665 | Phone 360.694.2691 | Fax 360.906.1958 | www.MFAinc.org

April 24, 2006  
Project 0168.01.02

Mr. Bob Vantuyl  
Ash Grove Cement Company  
P.O. Box 25900  
Overland Park, Kansas 66225

Re: Rock Sump Evaluation

Dear Mr. Vantuyl:

Maul Foster & Alongi, Inc. (MFA) is pleased to provide you this evaluation of eight outfalls and four rock sumps near the Ash Grove Cement Company facility located at 2600 N. River Street, Portland, OR. As you know, this evaluation was completed to address questions raised by an underground injection control (UIC) registration form that was completed by Goldendale Aluminum Company (Goldendale) when they owned the site. Goldendale apparently completed the application based on a comment in a letter dated April 6, 2005 from the City of Portland Bureau of Environmental Services (BES) to Wayne Wooster of Goldendale that said the rock sumps noted in the site's Storm Water Pollution Control Plan (SWPCP) may be considered UICs.

## DOCUMENT REVIEW

MFA obtained a base map from Westmar Consultants (see Figures 1 and 2) and reviewed a survey of the facility from Caswell/Hertel Surveyors Inc. dated September 26, 2005. The survey from Caswell/Hertel indicates a rock sump located directly east of Outfall 1 (see Figure 1). Bob White at Caswell/Hertel stated that the rock sump designation was an assumed label for a rocky area and was not based on any specific research.

MFA reviewed past reports and maps provided by Goldendale Aluminum to assess the approximate location and discharge points of the rock sumps. A historical map dated December 2000 shows four rock sumps located east of the fence along River Street, with the rock sumps each connected to separate outfalls to the Willamette River (Outfalls 1, 3, 7, and 8, see Figure 3 from Goldendale). The 2000 map shows the site stormwater collection system discharging to Outfall 4 and Union Pacific Rail Road stormwater discharging to Outfall 2. It shows Outfalls 5 and 6 as capped. Another map from a preliminary assessment report dated March 2000 shows two rock sumps west of the fence and two rock sumps east of the fence, with all four rock sumps connected to separate

R:\0168.01 Ash Grove Cement Co\Report\02\_Rock Sump Evaluation 4.24.06\LF-B.Vantuyl.doc-95\vgc:1

outfalls (see CH2MHILL Figure 2-2). However, a map from Goldendale's SWPCP dated December 2001 shows only the two rock sumps west of the fence, with one rock sump discharging to Outfall 4 and the other rock sump with apparently no discharge point (see CH2MHILL Figure 3).

MFA also reviewed site construction drawings from 1981 that were recently provided to MFA by Westmar (see Martin Marietta Aluminum Drawing Number 7790-36-101 and 7790-36-102). These drawings show 12-inch galvanized corrugated metal pipes in the location of Outfall 1 and 3. The pipes terminate at the east end of the site in galvanized end sections to collect surface water east of the site for discharge to the Willamette River. No infiltration systems are shown on the construction drawings.

## **SITE OBSERVATIONS AND UTILITY LOCATE**

MFA personnel conducted multiple site visits to assess site conditions. The six existing outfalls (1, 2, 3, 4, 7, and 8) depicted on the site maps are visible along the bank of the site. MFA observed no evidence of any stormwater structures at the locations west of the fence that were designated as rock sumps in the CH2MHill maps.

Locates Down Under Inc. completed a utility locate on February 3, 2006, to determine the direction and length of five of the existing outfalls (1, 2, 3, 7, and 8). Following the utility locate, the termination point of the outfall piping was flagged and later surveyed by Caswell/ Hertel. All five outfalls were determined to run to points outside the facility fence, as shown on the attached figures and described further below. Pipeline Video and Cleaning LLC completed a second utility locate and video inspection on March 28, 2006, to determine the direction and length of piping connected to two catch basins east of the rail car load out building and to further investigate Outfall 7.

## **FINDINGS**

The results of the mapping review, utility locates, and site observations are summarized below.

### **Outfall 1**

A 12-inch Corrugated Metal Pipe (CMP) runs northeast from Outfall 1 and across the property. The locator lost the signal for the pipe at approximately 6 feet east of the fence line. Ash Grove staff excavated the area where the signal was lost and discovered the pipe termination approximately 18" below ground surface. The termination point consisted of a

fanned corrugated metal collector filled with angular rocks (see Photograph 1). It is assumed that this collector is what is referred to as the "rock sump" on many of the site maps. Ash Grove staff has determined that the collector lies just outside of the property line, based on the physical location of survey boundary corner stakes at the site (see Figure 1). There is no evidence of a UIC at this location.

### **Outfall 2**

A 30-inch CMP storm drain runs northeast from Outfall 2, through a manhole located on the Ash Grove site to a manhole located outside the fence line and continues to the northeast (See Figure 1). The line discharges stormwater from the adjacent Union Pacific Railroad (UPRR) property to the Willamette River. No stormwater from the Ash Grove site enters the line. UPRR maintains an easement on the line. Details regarding this easement may be found in the Multnomah County Easement Record (book 68, pages 362-367; June 9th 1984).

### **Outfall 3**

A 12-inch CMP runs northeast from Outfall 3 and across the property. During the utility locate, the signal was lost approximately 2 feet outside the fence line at a location outside the property line (see Figure 2). It is assumed that a metal rock sump collector, similar to the one that discharges to Outfall 1, is located at the termination line and that there is no UIC system.

### **Outfall 4**

Based on the review of historical drawings, Outfall 4 discharges stormwater from the site out to the Willamette River. The discharges from this outfall are permitted under the site's National Pollutant Discharge Elimination System permit. There was no evidence of a UIC system associated with Outfall 4.

### **Outfalls 5 and 6**

Goldendale site drawings show Outfalls 5 and 6 as being capped (see Goldendale's Figure 3). Ash Grove personnel have also verified that they have seen these outfalls capped at the bank of the river. MFA did not investigate these outfalls.

### **Outfall 7**

An 8-inch CMP runs east from Outfall 7 along the north silo to the edge of the concrete pad and then bends in a northeast direction (see Figure 2). The pipeline video confirmed

that the pipe does bend in a northeast direction approximately 46 feet upstream of the end of the outfall. The pipe seam at the bend has separated and bare earth can be seen in the video. It is probable that stormwater flowing through the pipe is infiltrating into the ground at this point. Based on the utility locate by Locates Down Under, the storm drain appeared to end at the water valve box outside the fence line. An investigation of the water valve box by Ash Grove staff indicated that the outfall line does not connect to the valve box. The water valve box lies outside the property line and it is assumed that a metal rock sump collector, similar to the one that discharges to Outfall 1 is located in close proximity to the vault and that there is no UIC system at this location.

### **Outfall 8**

A CMP runs northeast from Outfall 8, under the south silo, and across the property (see Figure 2). During the utility locate, the signal was lost approximately 3 feet outside the fence line at a location that appears to be outside the property line. It is assumed that a metal rock sump collector, similar to the one that discharges to Outfall 1 is located at the termination line and that there is no UIC system at this location.

### **Catch Basins East of Rail Car Load Out Building**

Two catch basins lie east of site near the load out building (see Figure 2). Water entering these catch basins is primarily from the nearby road. However water from the downspout located at the northeast corner of the load out building flows onto the ground and overland into the catch basin. Stormwater from the paved surface between the rail line and the fence east of the south rail car mover also runs into the catch basin (see Figure 2).

The pipeline video determined that the catch basins are connected by a 6-inch polyvinylchloride (PVC) pipe. The north catch basin also has a 10-inch concrete discharge pipe running in a northwesterly direction. The concrete pipe was videoed to approximately 47 feet before debris hindered the inspection. The pipe is oriented toward the termination point of Outfall 3 and may discharge to Outfall 3; however, the discharge point of the 10-inch pipe is unknown.

### **SUMMARY**

MFA has determined that outfalls labeled as 1, 2, 3, 7, and 8 all lead to points outside the Ash Grove Loading facility property line (see Figure 1). Based on the information available, it appears likely that four rock sumps consisting of fan collectors filled with rock are located at the termination points of Outfalls 1, 3, 7, and 8 and that no UIC units

Mr. Bob Vantuyt  
April 24, 2006  
Page 5

Project 0168.01.02

are associated with the outfalls. MFA recommends that Ash Grove withdraw the UIC application from the DEQ.

Stormwater from the Ash Grove facility does not flow toward the rock sumps or the UPRR property with the exception of runoff from the downspout from the rail car load out building that discharges into the nearby catch basin and stormwater flowing from the paved surface between the rail line and the fence east of the south rail car mover (see Figure 2). Stormwater at both locations should be rerouted and contained on site.

An NPDES permit may be required for the discharges from the rock sump collectors. MFA recommends that Ash Grove consider coordination with UPRR to address the discharges from the four rock sump collectors located outside the property line to Outfalls 1, 3, 7, and 8, and repair of the piping discharging to Outfall 7.

Sincerely,

Maul Foster & Alongi, Inc.



Alistaire Clary, P.E.  
Senior Engineer



Michael Rounds, E.I.T  
Staff Engineer

Attachments: Limitations

Figures 1 and 2

Goldendale Aluminum Figure 3

CH2MHill Figures 2- Stormwater from the Ash Grove facility does not flow toward the rock sumps or the UPRR property with the exception of runoff from the downspout from the rail car load out building that discharges into the nearby catch basin and stormwater flowing from the paved surface between the rail line and the fence east of the south rail car mover (see Figure 2). 2, and 3

Martin Marietta Aluminum Drawings 7790-36-101 and 7790-36-102

Photograph 1

cc: Glen Dollar, Ash Grove Cement  
John Hone, Ash Grove Cement

## **LIMITATIONS**

---

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

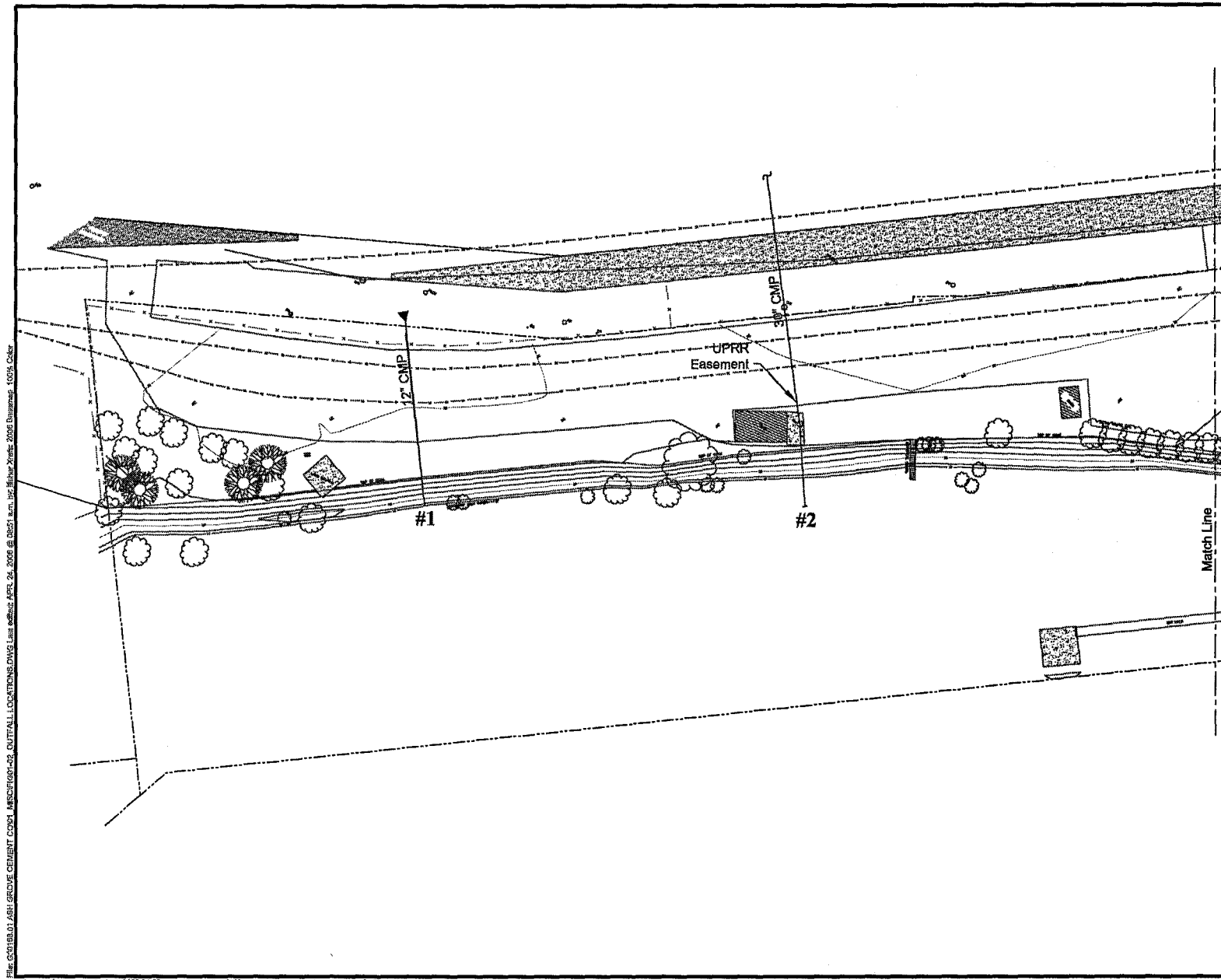
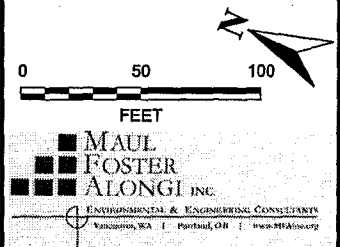
Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

**Figure 1  
Existing Conditions**

**Ash Grove Cement Co.  
Portland, Oregon**

- Legend:**
- Property Boundary
  - - - Fence
  - Stormwater lines by utility locate on 02/03/06 by Locates Down Under.
  - #2** Outfall Location and Designation
  - ◀ Rock Sump

**Note:**  
Based on Alta Land Title survey by Caswell/Hertel Surveyors on Sept. 26, 2005, and updated in February 2006 and March 2006.



File: G:\0188\01 ASH GROVE CEMENT CO.04 MISC\FIG001-02 OUTFALL LOCATIONS DWG.dwg User: jclifford Date: 04/24/2006 @ 08:51 a.m. Plot: Figure 1.dwg 100% Color

Layout: 1 Project: 0166.01.02 Drawn By: A. Young Approved By: A. Clay

**Figure 2**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**

**Legend:**  
Property Boundary

Fence

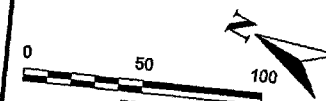
Stormwater lines by utility  
locate on 02/03/06 by  
Locates Down Under.

Stormwater lines by utility  
locate 03/28/06 by  
Pipeline Video &  
Cleaning. Locations are  
approximate and are not  
surveyed.

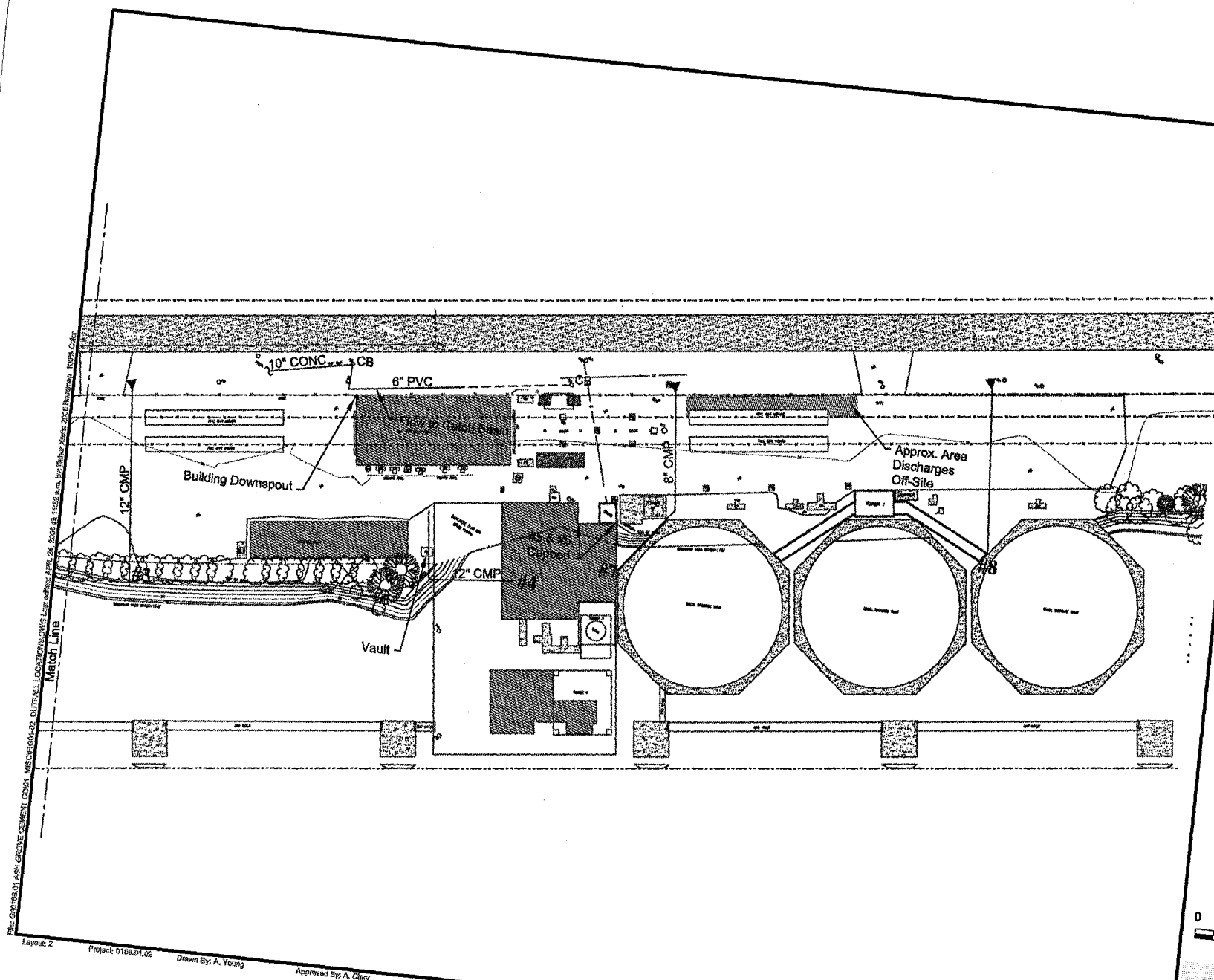
#2 Outfall Location and  
Designation

Rock Sump

**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.



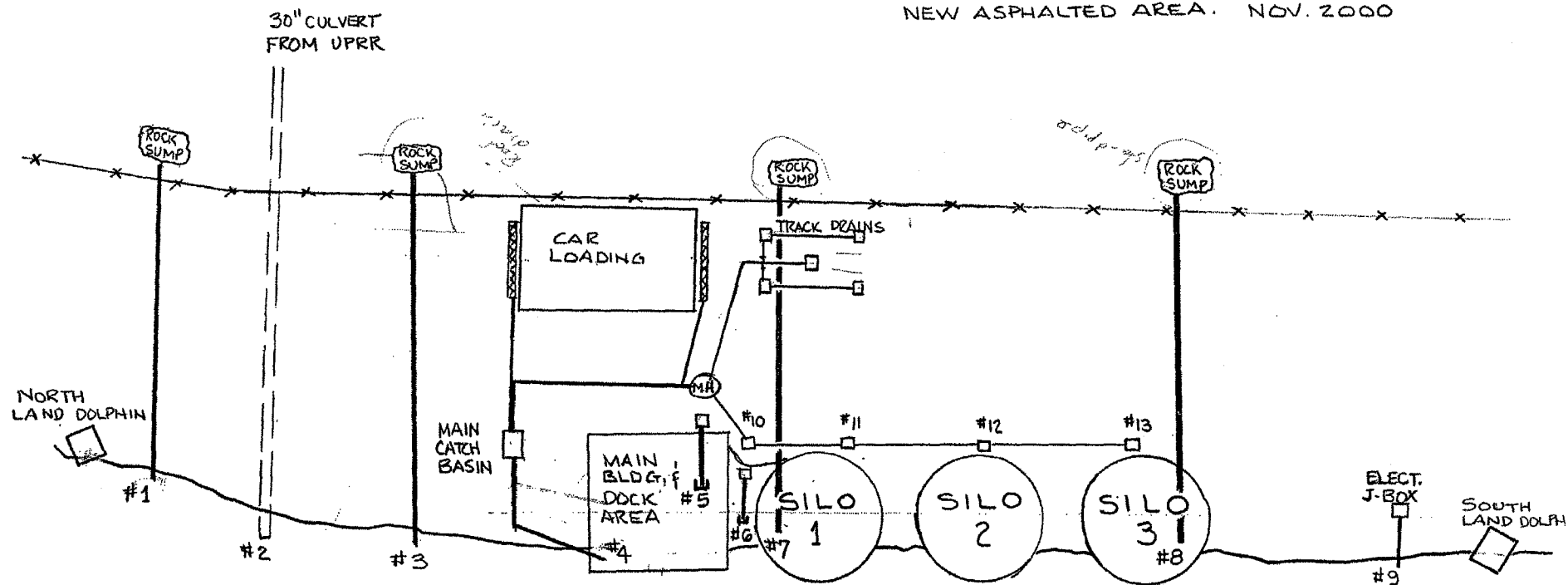
**MAUL**  
**FOSTER**  
**ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Buckingham, WA | Portland, OR | www.MFAlongi.com





NOTES:

- 1) #5 & #6 DRAINS CAPPED & PLUGGED NOV. 2000
- 2) #10, #11, #12, #13 ADDED TO CATCH RUNOFF FROM NEW ASPHALTED AREA. NOV. 2000



REVISED 12/4/00 BY D. KANNARD  
 RE DRAWN 9/28/05 BY B. PALMER

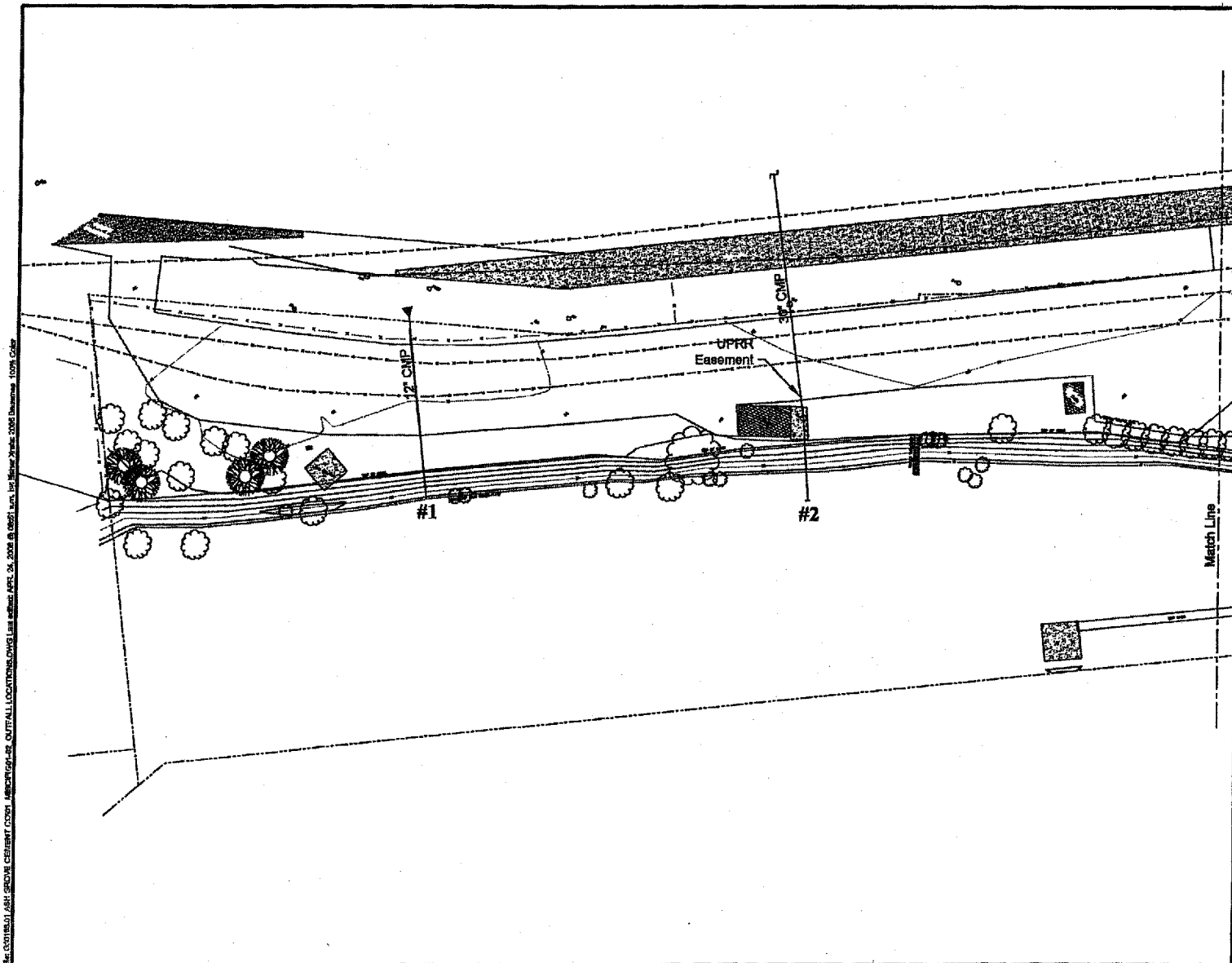
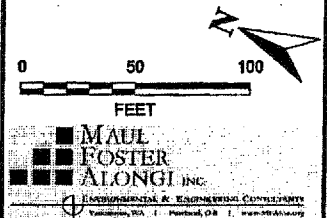
OUTFALL DRAIN PLAN

**Figure 1  
Existing Conditions**

**Ash Grove Cement Co.  
Portland, Oregon**

- Legend:**
- Property Boundary
  - - - Fence
  - Stormwater lines by utility locate on 02/03/08 by Locates Down Under.
  - #2 Outfall Location and Designation
  - ◀ Rock Sump

**Note:**  
Based on Alta Land Title survey by Caswell/Hertel Surveyors on Sept. 26, 2005, and updated in February 2006 and March 2006.



THE CONTIGUOUS ASH GROVE CEMENT CO. MAPS/FIGURE 1-2, OUTFALL LOCATIONS, DOWNSIDE, APRIL 24, 2008, 8:00AM, AND, IN WASH. STATE, 2008, DOWNSIDE, 100% COPY

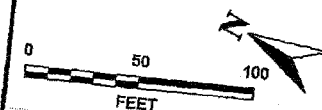
Layout 1 Project 0169.01.02 Drawn By: A. Young Approved By: A. Clary

**Figure 2**  
**Existing Conditions**

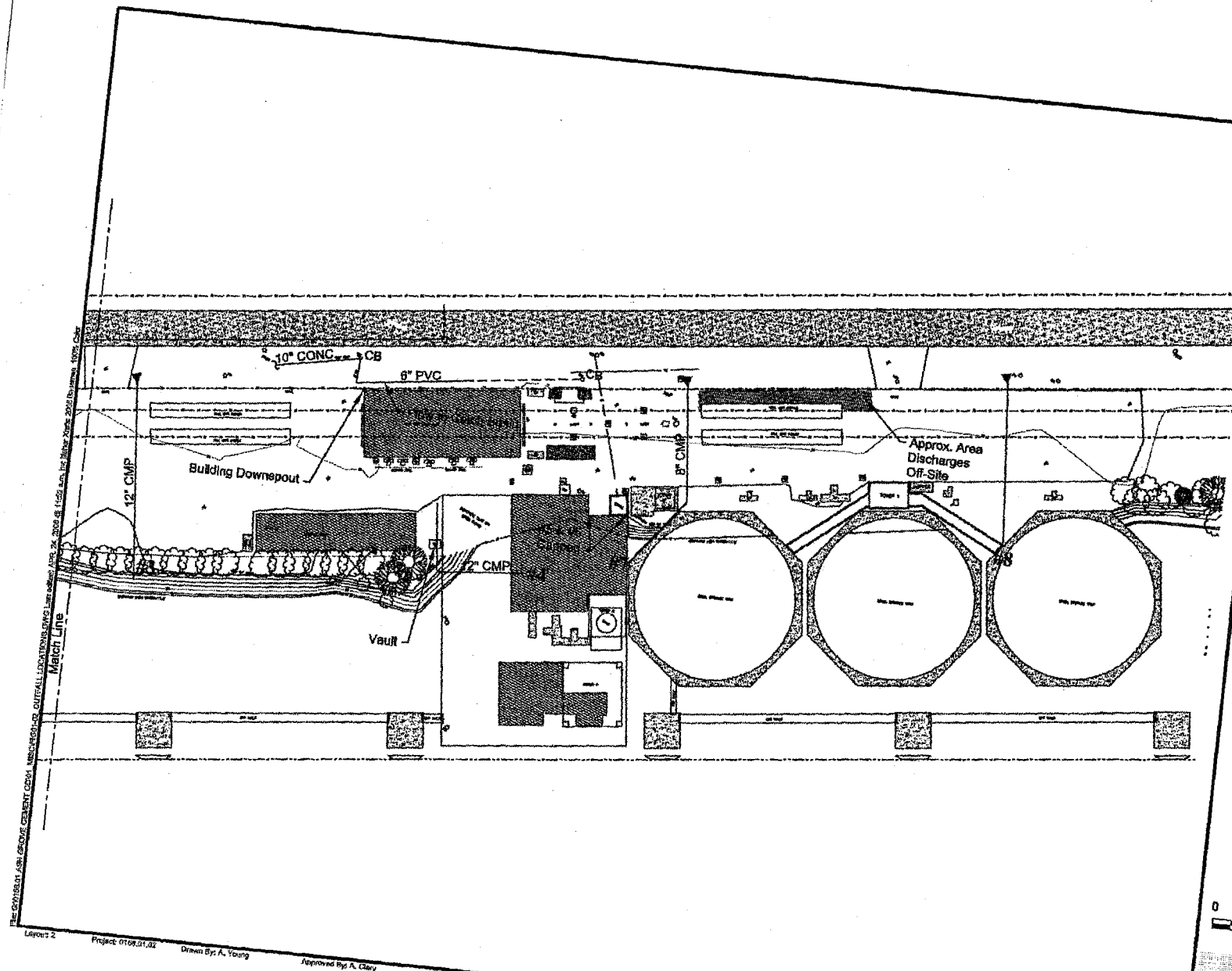
**Ash Grove Cement Co.**  
**Portland, Oregon**

- Legend:**
- Property Boundary
  - - - Fence
  - Stormwater lines by utility locate on 02/03/06 by Locates Down Under.
  - - - Stormwater lines by utility locate 03/28/06 by Pipeline Video & Cleaning. Locations are approximate and are not surveyed.
  - #2 Outfall Location and Designation
  - ◀ Rock Sump

**Note:**  
Based on Alta Land Title survey by Caswell/Hertel Surveyors on Sept. 26, 2005, and updated in February 2006 and March 2006.



**MAUL FOSTER ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Portland, WA | Portland, OR | San Francisco, CA





ENVIRONMENTAL & ENGINEERING CONSULTANTS

7223 NE Hazel Dell Avenue, Suite B | Vancouver, Washington 98665 | Phone 360.694.2691 | Fax 360.906.1958 | www.MFAinc.org



May 4, 2006  
Project No. 0168.01.02

Dennis Jurries  
Northwest Water Quality Division  
Oregon Department of Environmental Quality  
2020 SW 4th Avenue, Suite 400  
Portland, Oregon 97201-4987

Aaron Wieting  
Industrial Stormwater Program  
Bureau of Environmental Services  
Water Pollution Control Laboratory  
6543 N. Burlington Avenue  
Portland, Oregon 97203-5452

Re: Submittal of SWPCP for Ash Grove Cement Company (File No. 107213)

Dear Mr. Jurries and Mr. Wieting:

On behalf of Ash Grove Cement Company (Ash Grove), Maul Foster & Alongi, Inc. (MFA) is submitting the attached Storm Water Pollution Control Plan (SWPCP) for Ash Grove's facility at 2600 North River Road in Portland, Oregon. A National Pollutant Discharge Elimination System (NPDES) 1200-Z General Permit (file number 107213) was recently transferred to Ash Grove. The attached SWPCP fulfills the requirements of Schedule A of the permit. The SWPCP describes pollution control measures at the recently acquired north terminal (which was previously permitted), as well as operations at the existing south terminal.

Please call if you have any questions.

Sincerely,

Maul Foster & Alongi, Inc.

Alistaire Clary, P.E.  
Senior Engineer

Michael Rounds, E.I.T.  
Staff Engineer

Attachments: SWPCP

cc/att: Bob Vantuyl, Ash Grove Cement  
Glenn Dollar, Ash Grove Cement  
John Hone, Ash Grove Cement (2)

**ASH GROVE CEMENT COMPANY**  
**STORM WATER POLLUTION CONTROL PLAN**  
**FILE NUMBER 107213**

Prepared for

Ash Grove Cement Company  
3737 North Port Center Way  
Multnomah County  
Portland, Oregon 97217

May 4, 2006

Prepared by

Maul Foster & Alongi, Inc.  
7223 NE Hazel Dell Avenue, Suite B  
Vancouver, Washington 98665

Project No. 0168.01.02

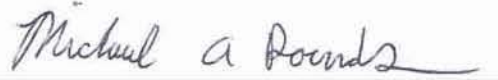
## Ash Grove Storm Water Pollution Control Plan

The material and data in this report were prepared under the supervision and direction of the undersigned.

Maul Foster & Alongi, Inc.

A handwritten signature in cursive script, reading "Alistaire Clary", written over a horizontal line.

Alistaire Clary, P.E.

A handwritten signature in cursive script, reading "Michael a Rounds", written over a horizontal line.

Michael Rounds, E.I.T.

## Ash Grove Storm Water Pollution Control Plan

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information. The information presented is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Responsible Corporate Officer:

Signature: Gary Wright Date: 5/2/06  
Printed Name: Gary Wright  
Title: Portland Operations Manager

## **CONTENTS**

---

<b>TABLES AND ILLUSTRATIONS</b>	<b>ix</b>
<b>1 INTRODUCTION</b>	<b>1-1</b>
1.1 Background	1-1
1.2 Purpose	1-1
<b>2 SWPCP REVIEW</b>	<b>2-1</b>
<b>3 SITE DESCRIPTION</b>	<b>3-1</b>
3.1 Industrial Activities	3-2
3.2 Storm Water Drainage Basins and Discharge Points	3-3
3.3 Potential Pollutants	3-6
3.4 Receiving Waters	3-6
3.5 Storm Water Monitoring	3-6
<b>4 SITE CONTROLS AND BEST MANAGEMENT PRACTICES</b>	<b>4-1</b>
4.1 Pollution Prevention Team	4-1
4.2 Best Management Practices	4-1
4.3 Spill Prevention and Response Procedures	4-4
4.4 Preventive Maintenance	4-5
4.5 Employee Education	4-6
4.6 Additional Best Management Practices	4-6
<b>5 RECORD KEEPING AND INTERNAL REPORTING PROCEDURES</b>	<b>5-1</b>
5.1 Record Keeping	5-1
5.2 Reporting Procedures	5-1
5.3 Implementation Schedule	5-2

### **LIMITATIONS**

### **REFERENCES**

### **FIGURES**



## **CONTENTS (Continued)**

---

**APPENDIX A 1200-Z NPDES PERMIT**

**APPENDIX B SWPCP REVIEW AND REVISION DOCUMENTATION  
FORM**

**APPENDIX C VISUAL MONITORING LOG**

**APPENDIX D SPILL INCIDENT REPORT FORM AND EMERGENCY  
CONTACTS**

**APPENDIX E MONTHLY STORM WATER INSPECTION LOG**

**APPENDIX F EMPLOYEE TRAINING DOCUMENTATION**

## ILLUSTRATIONS

---

**Following Report:**

### **Figures**

Figure 1 Site Location

Figure 2A – 2F Existing Conditions

# 1 INTRODUCTION

---

## 1.1 Background

In 1990 the U.S. Environmental Protection Agency (USEPA) adopted regulations requiring National Pollutant Discharge Elimination System (NPDES) permits for discharges of storm water to surface waters from certain industrial activities. The Oregon Department of Environmental Quality (DEQ) is responsible for implementing these regulations and issuing permits. On July 26, 2002 the DEQ issued a 1200-Z General National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit to Goldendale Aluminum Company (GAC) (File Number 107213). The current permit expires on June 30, 2007. Ash Grove Cement Company (Ash Grove) purchased the GAC property on December 28, 2005. On January 10, 2006, Ash Grove received confirmation from DEQ that the NPDES permit 1200-Z (file no. 107213) has officially been transferred to Ash Grove. A copy of the 1200-Z NPDES permit is included as Appendix A.

## 1.2 Purpose

This Storm Water Pollution Control Plan (SWPCP) was prepared in compliance with Schedule A of the 1200-Z permit. The SWPCP includes both the north terminal (former GAC property) and the south terminal (property to the south located at 3737 North Port Center Way that has been owned and operated by Ash Grove since 1995 as a cement distribution terminal).

The SWPCP is a guidance document intended for use by Ash Grove personnel to minimize releases of pollutants to surface water from the facility's cement transfer operations. The SWPCP is intended to describe the permit requirements, relevant site information, and Best Management Practices (BMPs) applicable to the Ash Grove facility.

## 2 SWPCP REVIEW

---

Maul Foster & Alongi, Inc. prepared this comprehensive update of the SWPCP in April 2006, based on a 1998 SWPCP for the facility that was prepared by CH2MHILL of Portland, Oregon, and on revisions to the SWPCP made by Ash Grove in January of 2006. Ash Grove will continue to review the SWPCP according to the following schedule:

- Within 60 days of exceeding a benchmark.
- If site conditions change materially.

As part of the SWPCP review, Ash Grove will verify implementation and internal compliance with the plan and identify any additional controls necessary. The SWPCP will be revised as needed, based upon the review. Revisions will be submitted to the DEQ within 14 days of completion. An SWPCP Review and Revision Documentation Form is included in Appendix B to track modifications to the SWPCP.

### 3 SITE DESCRIPTION

---

Ash Grove has operated a cement distribution facility at 3737 North Port Center Way since 1995. Ash Grove purchased the property north of its existing operations from GAC on December 28, 2005. The combined property (facility) includes a north terminal (former GAC property) and a south terminal (existing Ash Grove facility). The facility is rectangular in shape and encompasses approximately 14.52 acres. The facility is located on the east bank of the Willamette River approximately nine miles upstream of the confluence of the Willamette River into the Columbia River and one mile northwest of the Fremont Bridge (see Figure 1). The facility is bordered on the west by the Willamette River, north by the City of Portland combined sewage outfall project, and east and south by Union Pacific railroad. The facility is located in the South 1/2 of Section 21 and the North 1/2 of Section 28 of Township 1 North, Range 1 East.

The facility is located in the northern portion of the Willamette Valley physiographic province. The region is underlain with sand and silt deposited on the flood plain and includes areas of artificial fill, largely derived from Recent alluvium.<sup>1</sup> The *Soil Survey of Multnomah County Area, Oregon*, compiled by the U.S. Soil Conservation Service, describes the soil at the subject property as Urban land, 0 to 3 percent slopes. No hydric soil components are listed for this soil series in the May 31, 1989, Hydric Soils in Multnomah County Area, Oregon, compiled by the U.S. Soil Conservation Service. Hydric soils are an essential characteristic of wetlands and are defined as soils which are saturated, flooded, or ponded long enough to develop anaerobic conditions in the upper part of the soil profile. From the published soil survey information available, it would appear that the subject site does not meet the soil criteria for jurisdictional wetlands. However, a comprehensive and site specific wetlands determination, including characterization of the soils using onsite assessment methods and assessment of hydrophytic vegetation and wetland hydrology, has not been performed.

The north terminal (8.22 acres) was originally completed in January 1982 as an alumina transfer facility. It includes ship mooring dolphins, a dock, a pneumatic conveyance system with a blower room (for material transfer from the ship to the silos), a reclaim system (for material transfer from the silos to the rail load-out building), three silos, a rail load-out building, a shop and administration building, a garage, a boat house, railroad spur tracks with car movers, and paved roadways (see Figures 2A, 2B, & 2C). Physical modifications

---

<sup>1</sup> United States Geological Survey, "Geologic Map of Oregon," 1991.

planned for the north terminal will include bulk handling equipment changes to facilitate the handling of Portland cement in addition to powdered alumina.

The south terminal (6.30 acres) was completed in December 1995 and operates as a cement distribution facility. It includes a barge mooring structure, a dock, six concrete storage silos, a physical testing lab, a rail unload structure, a shop area, railroad spur tracks with car indexer, a truck wash area, an operations building, and paved roadways (see Figures 2C, 2D, 2E, & 2F).

## **3.1 Industrial Activities**

### **3.1.1 Material Handling**

Ash Grove Cement intends to utilize the north terminal to unload Portland cement and alumina from ocean vessels and shipping the product out via railcar and truck. The initial permitted transfer limits will be 1,050,000 tons annually. Ships containing up to 60,000 tons of cement or alumina will be moored at the north terminal periodically. The cement or alumina will be transferred from the ship to one of the three 90-foot-diameter by 90-foot-high silos. The combined storage capacity of the silos is approximately 60,000 tons. The transfer will be accomplished by a pneumatic system which employs a large blower in the concrete blower room located on the east side of the dock. The pneumatic piping consists of a series of air lifts and slides. The facility will operate 24 hours a day when offloading is taking place. A reclaim system is used to transfer the cement and alumina from the silos to the rail load-out building into covered rail hopper cars. The hopper cars are moved on two parallel railroad spur tracks from the south to the north by car movers located on either end of the rail load-out building. The hopper cars are loaded by an automatic system that is monitored in a control room. Flexible chutes form a tight seal around the hopper opening during transfer operations. When the chute is raised off of the opening, the cover to the opening is closed and secured. The hopper cars are then transported offsite.

Following proposed site modifications, the south terminal will receive cement from the north terminal via an enclosed conveyor system. The south terminal will also receive cement from rail cars. Cement will be transferred to trucks at the south terminal.

### **3.1.2 Truck Wash Area and Drain Table**

Ash Grove has a designated truck wash area at the south terminal where pressurized water is used to clean trucks hauling cement before they leave the facility (see Figure 2D). The truck wash area is constructed on a concrete pad and wash water is collected through a racked floor drain that conveys the wash water to a pH adjustment system. From the pH adjustment system water is discharged into a large pond where it is infiltrated into the

ground. The truck wash operation is permitted under WPCF Permit 17B (file no. 110230) and is not part of the activities permitted under the facility's NPDES permit.

### **3.1.3 Equipment Refueling and Garage**

Ash Grove utilizes motorized equipment to conduct daily operations (e.g., bobcat, front end loader, and forklift). These items require daily fueling and lubrication. A 500-gallon double-walled diesel aboveground storage tank (AST) is located at the north terminal on the north side of the garage (see Figure 2B). The tank and dispenser are protected against collision by concrete-filled steel pipe bollards. Ash Grove plans to upgrade secondary containment around this tank to accommodate containment of fuel deliveries.

Truck and equipment maintenance activities are conducted inside the garage. Vehicles are stored under cover in the garage when they are not being used. Ash Grove plans to start storing 55-gallon drums of motor oil and hydraulic oil in the garage. Ash Grove will also store a 300-gallon waste oil tank with secondary containment in the garage. These activities do not impact storm water.

### **3.1.4 Garden Storage Shed and Boat House**

A garden storage shed and boat house are located at the north terminal (see Figure 2A). The buildings are north of the garage, west of the paved roadway, and near the top of the river bank. Gardening equipment (lawn mowers, hedge shears, etc.) is stored in shed. The equipment is used to maintain the grounds. Ash Grove intends to store the boat in the Boat House. Gasoline and oil will not be stored in the garden shed or boat house except for that which is in the equipment.

## **3.2 Storm Water Drainage Basins and Discharge Points**

The facility lies within the Lower Willamette Basin. A survey of the facility shows the property ranges from an elevation of 17 feet near the water to 31 feet NGVD 29(47). The site is generally flat with little topographic relief except for the bank extending to the Willamette River. Precipitation occurs mainly in the form of rain with an annual average of 37.07 inches per year.<sup>2</sup>

In the north terminal, impervious areas, including all roofed and asphalt paved areas, account for 1.54 acres of the total 8.22 acres, or approximately 19 percent of the area. Note that the north terminal property area includes a portion of the Willamette River beyond the

---

<sup>2</sup> *Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1971-2000*. National Ocean and Atmospheric Administration, January 2006. Information recorded at Portland WSFO AP Station No. 6751.



low water line. In the south terminal, impervious areas account for 1.59 acres of the total 6.30 acres, or approximately 25 percent of the area.

The north terminal is divided into four local drainage basins (Drainage Basins 1 through 4) and the south terminal is divided into two local drainage basins (Drainage Basins 5 and 6). Drainage patterns for each basin are shown on Figures 2A through 2F, with arrows indicating local flow patterns of storm water runoff. Note that the rail-spur covered in ballast rock is not included in the impervious area inventory. Each basin is described in the following sections. Operations in each drainage basin have been reviewed. Potential pollutants have been identified where a reasonable potential exists for contributing significant amounts of pollutants to storm water runoff from the drainage basin.

### **3.2.1 Drainage Basin 1**

Drainage Basin 1 is approximately 0.24 acres, all of which is impervious. Basin 1 includes the paved areas south of the rail load out building, east of the silos, and west of the rail car movers (see Figure 2B). Basin 1 also includes storm water that drains off the hopper rail cars during their movement through the building and that is collected in catch basins inside the rail load-out building and trench drains at both end of the rail load-out building. Cement and alumina are potential pollutants to the storm water runoff from this area. Site controls for these potential pollutants are discussed in Section 4. All storm water drains through catch basins or trench drains to a pipe network and vault before discharging from Outfall 4. The vault, measuring 5.2 feet long by 3.7 feet wide by 6 feet deep, acts as a settling basin before storm water is discharged from Outfall 4 to the Willamette River.

### **3.2.2 Drainage Basin 2**

Drainage Basin 2 includes the northern portion of the property, the graveled railroad spur tracks, the garden storage shed, the boat house, an asphalt parking lot, the 500-gallon diesel AST, and the garage (see Figures 2A and 2B). Petroleum products from fueling and servicing operations of mobile equipment are potential pollutants to the storm water runoff from this area. Site controls for these potential pollutants are discussed in Section 4. Storm water runoff from this area infiltrates into the railroad gravel bed or into the grassy area west of the asphalt surface.

### **3.2.3 Drainage Basin 3**

Drainage Basin 3 includes the piling-supported concrete dock; including the shop, administration building, and the pneumatic unloading system (see Figure 2B). Ship unloading operations pose little potential impacts to the storm water runoff from this area because the cement or alumina being transported is totally enclosed. Most storm water runoff from this area discharges directly to the Willamette River by sheet flow. Storm



water that falls within the reclaim system air lift pit and the ship unloading air lift pit is pumped directly to the river and is checked for oil sheen regularly. There are no discharges other than storm water to the pits.

#### **3.2.4 Drainage Basin 4**

Drainage Basin 4 includes the south part of the north terminal, the graveled railroad spur tracks, and the reclaim system (see Figures 2B and 2C). Reclaim operations pose little potential impacts to the storm water runoff from this area because the cement or alumina being transported is enclosed. Storm water runoff from this area either infiltrates into the railroad bed or grassy strip west of the asphalt surface.

#### **3.2.5 Drainage Basin 5**

Drainage Basin 5 includes the facility roadway and landscaped areas in the north part of the south terminal (see Figures 2C, 2D, and 2E). Storm water from most of the roadway runs off the road and infiltrates in the area west of the road. Storm water from the landscaped areas infiltrates directly into the ground.

Storm water in the immediate area around the truck wash flows to the truck wash rack floor drain that conveys the wash water to a pH adjustment system and then to an infiltration pond. Hydrochloric acid is used in the pH adjustment system and is a potential pollutant. The acid is stored in 55-gallon drums. Any spills or leaks of the acid would be contained in the pH adjustment system. Cement, oil and grease, and metals are also potential pollutants to the truck wash area. However, the truck wash operation is permitted under WPCF Permit 17B (file no. 110230) and is not part of the facility's NPDES permit.

#### **3.2.6 Drainage Basin 6**

Drainage Basin 6 includes the facility roadway and landscaped areas in the south part of the south terminal. It also includes the area around the south terminal silos and the silo bypass road (see Figures 2E, and 2F). Storm water either infiltrates into pervious areas adjacent to the roadway or flows as shallow concentrated flow toward the dock where it discharges to the Willamette River.

#### **3.2.7 Drainage Basin 7**

Drainage Basin 7 includes the bank of the Willamette River and the three north terminal storage silos (see Figures 2A through 2F). Storm water from Basin 7 either infiltrates or discharges via sheet flow to the Willamette River. Storm water runoff from the roofs of the three storage silos flows directly to the Willamette River by sheet flow.

### 3.3 Potential Pollutants

Potential pollutants that could impact storm water are listed below.

- Cement dust
- Alumina (north terminal)
- Petroleum products including fuel, oil and grease from fueling operations and from vehicles operating or parking at the site
- Heavy metals (copper, lead, nickel, and zinc) from roofs and equipment stored on site
- Hydrochloric acid (south terminal)

Site controls for these potential pollutants are discussed in Section 4.

### 3.4 Receiving Waters

Storm water from the Ash Grove facility is discharged to the Willamette River through Outfall 4 and as sheet flow from the loading docks at the north and south terminals. The Willamette River has been identified as Water Quality Limited by the DEQ. Storm water from much of the site infiltrates directly into the ground through graveled or grassy areas.

### 3.5 Storm Water Monitoring

As required by Schedule B of the 1200-Z permit, Ash Grove will collect storm water samples twice each year, at least 60 days apart, during a storm water runoff event when runoff is occurring from the site. It is preferred, but not required that one sample is collected in the fall and one sample is collected in the spring. The samples will be analyzed for the parameters specified in the facility Permit and compared to the respective benchmarks set forth in the Permit and listed below.

Parameter	Benchmark	Frequency	Sample Type
Total Copper	0.10 mg/l	Twice per Year	Grab
Total Lead	0.04 mg/l	Twice per Year	Grab
Total Zinc	0.60 mg/l	Twice per Year	Grab
pH	5.5-9.0 Std Units	Twice per Year	Grab
Total Suspended Solids	130 mg/l	Twice per Year	Grab
Oil and Grease	10 mg/l	Twice per Year	Grab

Ash Grove collects samples at two representative sampling locations: Outfall 4 (Basin 1) and at the south terminal dock (Basin 6). Ash Grove performs visual observations on a

monthly basis, if a storm event has occurred, to identify oil and grease sheen and floating solids. Ash Grove also measures temperature monthly during the visual observations. Visual monitoring is completed at the Outfall 4 and south terminal dock sampling locations. The results are logged on the Visual Monitoring Log (see Appendix C).

If the benchmarks listed in the Permit are met (or if exceeded parameters have been due to natural or background conditions as described in Schedule A.9.b of the Permit) for at least four consecutive storm water monitoring events over 24 continuous months, a written request may be submitted to DEQ requesting a cessation of monitoring. Visual observations must be continued.

## **4 SITE CONTROLS AND BEST MANAGEMENT PRACTICES**

---

### **4.1 Pollution Prevention Team**

The SWPCP implementor is the Portland Terminal Manager. Operational employees will receive training in the site BMPs and goals of the SWPCP, spill prevention and control, good housekeeping, and significant materials management practices.

### **4.2 Best Management Practices**

Schedule A of the Permit lists several BMP that are required if technically and economically feasible. These BMPs are described below.

#### **4.2.1 Containment/Fueling Operations**

All hazardous materials must have secondary containment to prevent leaks and spills. Hazardous materials used at the facility are stored inside enclosed buildings. The buildings provide containment of these materials. Containment of waste oil is described below in Section 4.2.3

Fueling operations for motorized equipment are conducted at the fueling station located adjacent to the garage. The 500-gallon double walled diesel tank is located on the outside north wall of the garage. Ash Grove intends on adding secondary containment to the fueling area to contain 110% of the capacity of the fuel tank. The tank is protected from heavy traffic and vehicles by concrete filled steel pipe bollards. The fueling areas include absorbent material and oil booms to prevent petroleum spills from entering the storm water catch basins. This multi-level approach reduces the risk of petroleum spills from entering the Willamette River. The following protocol is used during fueling operations to reduce the risk of spills:

- Drip pans are placed under the fuel tank during fueling operations, as an extra precaution, to capture fuel that may spill. Any spilled fuel will be immediately transferred from the drip pan to a waste fuel container and properly disposed.
- Spills will be immediately addressed in accordance with the provisions of this SWPCP.

- An adequate supply of response material is maintained.
- Employees are trained on the proper use of fuel dispensers. “No Topping off” signs are posted in reduce spillage and venting of gas fumes to the air.

#### **4.2.2 Oil and Grease**

Each catch basin has a sump and an elbow to collect sediment and to provide an initial trap for floating debris, oils and grease. The catch basins are routinely inspected and cleaned.

#### **4.2.3 Waste Chemicals and Material Disposal**

Used oil is generated as a result of site operations. The waste oil collection and containment area is located inside the garage (see Figure 2B). A 300-gallon waste oil tank within secondary containment will be located in the garage. This containment area will be covered and will not be exposed to the elements. The configuration of the used oil area will have separate tanks for anti-freeze and used oil.

Used oil generated as a result of routine maintenance will be collected in drip pans and designated containers. The used oil will immediately be transferred to the used oil container. Drip pans will be clearly marked. No used oil or byproducts will be kept or stored outside the garage.

A local waste oil company is retained as required to pick up all waste oil products. The waste petroleum products are recycled and the absorbent pads properly disposed of offsite. Accumulated oil will be recycled through licensed, certified processors.

#### **4.2.4 Erosion and Sediment Control**

Site roadways are paved to eliminate erosion in those areas. Unpaved areas are vegetated and/or rocked to help prevent erosion and to control sedimentation.

#### **4.2.5 Debris Control**

Each catch basin has a sump and an elbow to collect sediment and to provide an initial trap for floating debris and oils. The catch basins are routinely inspected and cleaned. Storm water from the catch basins at the north terminal is conveyed through a vault. The vault allows solids to settle out before they are discharged from Outfall 4.

#### **4.2.6 Storm water Diversion**

Storm water runoff is not currently diverted away from any particular areas of potential storm water contamination since all significant industrial activities are enclosed or covered.

#### **4.2.7 Covering Activities**

The ships are securely moored to the dock before any unloading operations are started. One compartment of the ship is unloaded at a time. Precautions are taken to ensure the containment of the cement or alumina. The unloading operation by Ash Grove is performed with a pneumatic system that keeps the cement and alumina enclosed and covered as it is transported from the ships to the storage silos. The pneumatic system and the silos are inspected and maintained to avoid any leakage.

Cement and alumina are reclaimed from the silos to either covered hopper rail cars or to the truck loadout silos. The reclaim system keeps the materials enclosed and covered as they are transported. In the rail load-out building, the cement and alumina are enclosed and covered as they are transported to the rail hopper cars. The operators in the rail load-out control room meter the flow and quantity to each hopper and remove the sealed chute from the opening when the flow has stopped and secure the hopper cover before it leaves the building. Rail hopper cars are closed and sealed before they leave the building.

A totally enclosed conveyor system will be installed that will transfer cement to the adjacent truck loadout located north of the storage silos.

Oil drums and the 300-gallon waste oil tank will be stored under cover in the garage, and the blower for the pneumatic system is contained under cover in a concrete building on the loading dock at the north terminal.

#### **4.2.8 Housekeeping**

Ash Grove maintains rigorous housekeeping standards for the facility, including the following:

- Equipment and especially hydraulic equipment is maintained in good working order.
- Cement and alumina are conveyed and stored in enclosed systems.
- A vacuum system located at the rail loadout building is used to cleanup any cement spills that may occur.
- A mobile sweeper is used to maintain the surface area of the facility.
- Catch basins, manholes, and vaults are cleaned out as necessary.



- Leaks and spills, including oils, fuels, and dust from site operations are promptly contained and cleaned up. Spill response kits are strategically located in the garage and the shop next to the administrative office to facilitate expeditious cleanup.
- Preventive maintenance for vehicles and equipment is performed regularly and equipment with leaks will be removed from service until the source of the leak has been repaired.
- Cleaning of oily parts is completed in the designated maintenance area of the garage. The containment area will be maintained to prevent spillage or overfill.
- Cement and alumina are stored within the silos to prevent exposure to weather and runoff.

#### **4.2.9 Other Site Controls**

##### **4.2.9.1 Truck Wash Area**

Ash Grove uses pressurized water to clean trucks leaving the site. The washing activities take place at a designated facility located at the south terminal. The truck washing facility is covered and the pad material is constructed of concrete, forming an impenetrable barrier to the subsurface. Wash water is conveyed through a raked floor drain and is processed through a settling tank and pH adjustment system. The effluent is discharged to a large infiltration pond. Wash water does not enter the storm water system. The truck wash operation is permitted under WPCF Permit 17B (file no. 110230) and is not included in the permitted activities for the facility's NPDES permit. Maintenance of equipment (e.g., oil changing, hydraulic line maintenance, etc.) is not conducted within the wash area.

### **4.3 Spill Prevention and Response Procedures**

Ash Grove will make every effort to reduce the possibility of spills. In the event of a spill, immediate response is required to prevent the spill from entering the storm water system. A spill incident report form and emergency response contact list are provided in Appendix D. The following action will take place in the event of a spill.

- Immediately assess the situation.
- If the spill is minor (e.g., and can be contained and cleaned with minimal effort):
  - Proceed with cleanup and report the event to the environmental manager as soon as reasonably possible. Response actions may include pumping the material into containers or using absorbent material to contain the spill, or both. Spill kits consisting of floor sweep and oil booms are stored in the garage and in the shop next to the administrative office (see Figure 2B) Floor sweep (e.g., kitty litter) and booms may be used to absorb liquid spills. Spills

that are in close proximity to catch basins may be contained by placing booms, catch basin plugs, and floor sweep around the catch basin.

- The material used to contain/clean the spill will be disposed of in containers provided specifically for this purpose. Spill drums (salvage drums) are located next in the garage.
- Report the event to management.
- If the spill is beyond the ability of a single employee to control, notify management and your supervisor immediately.

## **4.4 Preventive Maintenance**

A preventative maintenance program is implemented at the site and summarized below:

- Monthly inspections are completed of areas where potential spills may occur (e.g., loading buildings, equipment fueling station, truck wash area, and equipment maintenance areas). Monthly Inspections are logged on the forms provided in Appendix E.
- Monthly inspections of the storm water system including catch basins, vault, manholes, outfalls, and roof drain downspouts are completed. Supplies in spill kits and floor sweep supplies are replenished during inspections. Monthly inspections are logged on the forms provided in Appendix E. Remove oil, debris, sludge, etc. from catch basins, manholes, and vault as necessary.

During cleaning activities, the following precautions are taken:

- Conduct cleaning operations during periods of dry weather.
- Take appropriate measures to prevent the discharge of materials to the outfalls during conducting cleaning operations.
- Clean sediment from the trap inside the catch basin each time the catch basin inserts are cleaned or replaced.
- Preventative maintenance also includes maintaining equipment in good working condition.
- The AST containment area is inspected monthly and cleaned as needed.



## **4.5 Employee Education**

Ash Grove educates operational personnel in identifying pollutant sources and potential pollutants; and understanding pollutant control measures, and spill response procedures. A storm water pollution prevention message is discussed at selected monthly general health and safety meetings. Documentation is kept in Appendix F.

In addition, all pertinent employees are required to review the SWPCP and sign an Employee Training Form that indicates the policies and procedures are understood (see Appendix F). Suggestion boxes are made available for new suggestions.

## **4.6 Additional Best Management Practices**

If necessary in order to maintain pollutant discharges below the established benchmarks for the site, Ash Grove shall select and implement additional BMPs from the BMP guidance document (Best Management Practices for Storm Water Associated with Industrial Activities, July 1999, DEQ NWR) or equivalent BMPs. The type and scope of any additional BMPs will depend on the chemical(s) of concern, their respective source(s), concentrations, and other pertinent information.

## **5 RECORD KEEPING AND INTERNAL REPORTING PROCEDURES**

---

### **5.1 Record Keeping**

Ash Grove will maintain the following information on-site:

- Results of storm water quality monitoring program.
- Inspection and maintenance of storm water control and treatment facilities. Monthly inspection forms are located in Appendix E.
- Spills or leaks of significant materials that may have impacted storm water runoff and the corrective actions taken.
- A SWPCP review report form (see Appendix B) filed in this notebook for documenting periodic reviews (e.g., if benchmarks are not met, a review is required).
- Copies of employee signature pages associated with the SWPCP training program (Appendix F).

Storm water system inspection forms and reports, including scope of inspection, personnel conducting inspection, date(s) of the inspection, major observations relating to the implementation of the SWPCP (i.e., performance of the BMPs, etc.) and actions taken to correct BMP inadequacies should be retained for five years.

Additionally, reports on spills of oil or hazardous substances in greater than “Reportable Quantities” (Code of Federal Regulations Title 40, Parts 302.4 and 177) including oils, gasoline, or diesel fuel, that causes a violation of the State of Oregon Water Quality Standards will be retained on file for a period of five years.

### **5.2 Reporting Procedures**

Grab sampling data for the previous monitoring period (July 1 – June 30) will be submitted to the DEQ Northwest Regional Office by July 15 of each year. In the case of insufficient rainfall for storm water-discharge-sample collection, sampling may be

rescheduled. Sampling performed by regulatory agencies may not be submitted as one or both of the required sampling events.

The annual report will be submitted by mail and will include:

- Site (facility) name as it appears on the Permit (Ash Grove Cement Company)
- File or site number (107213),
- Complete date of each sampling event,
- Sampling point,
- Analysis results for parameters in the Permit.

### **5.3 Implementation Schedule**

If storm water quality fails to meet benchmarks, additional BMPs will be implemented at the facility as soon as practicable.

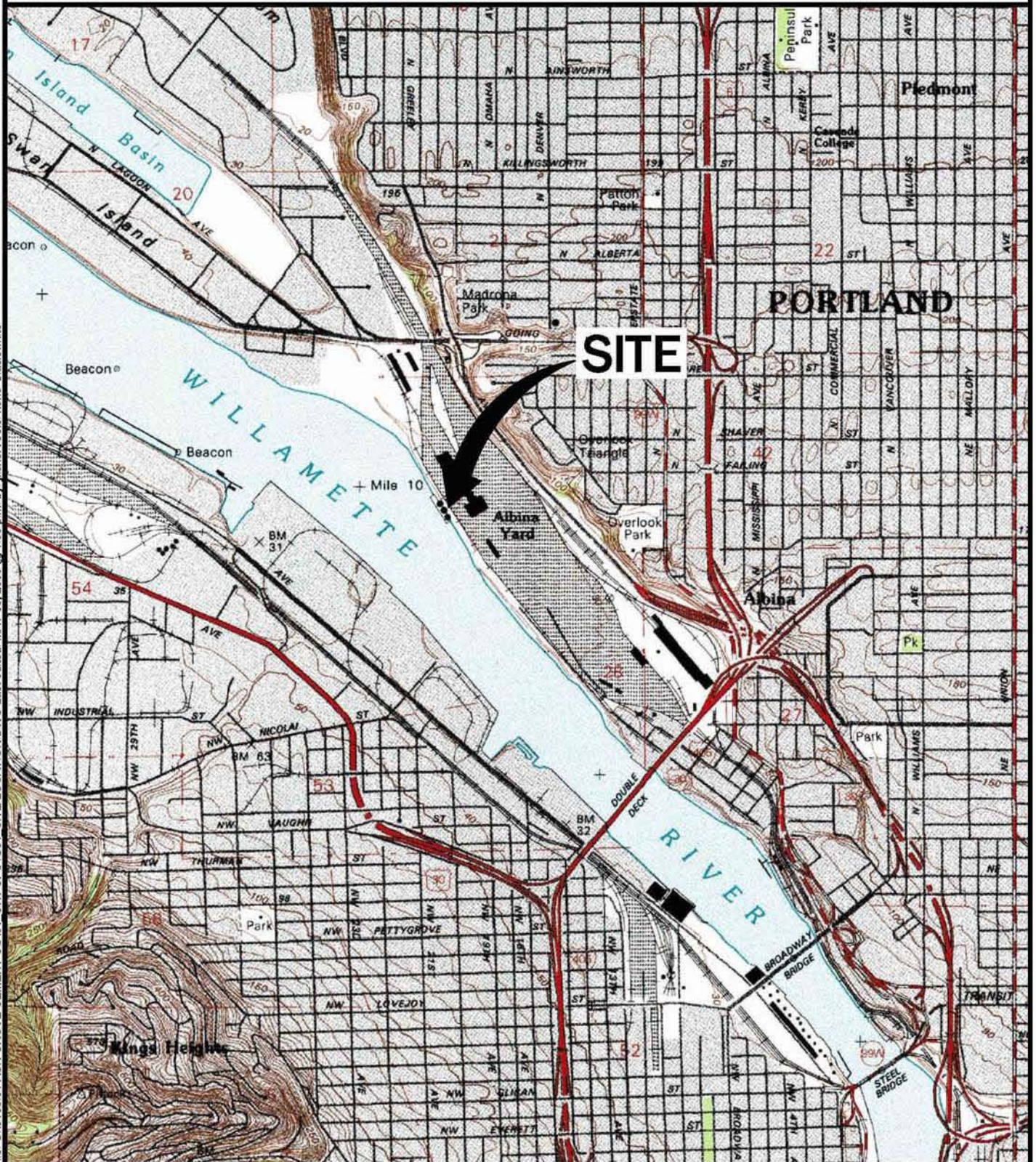
## FIGURES





Source: U.S.G.S. 7.5 minute Quadrangle  
Site Address: 2737 North Port Center Way  
Section: 21 Township: 1N Range: 1E Of Willamette Meridian

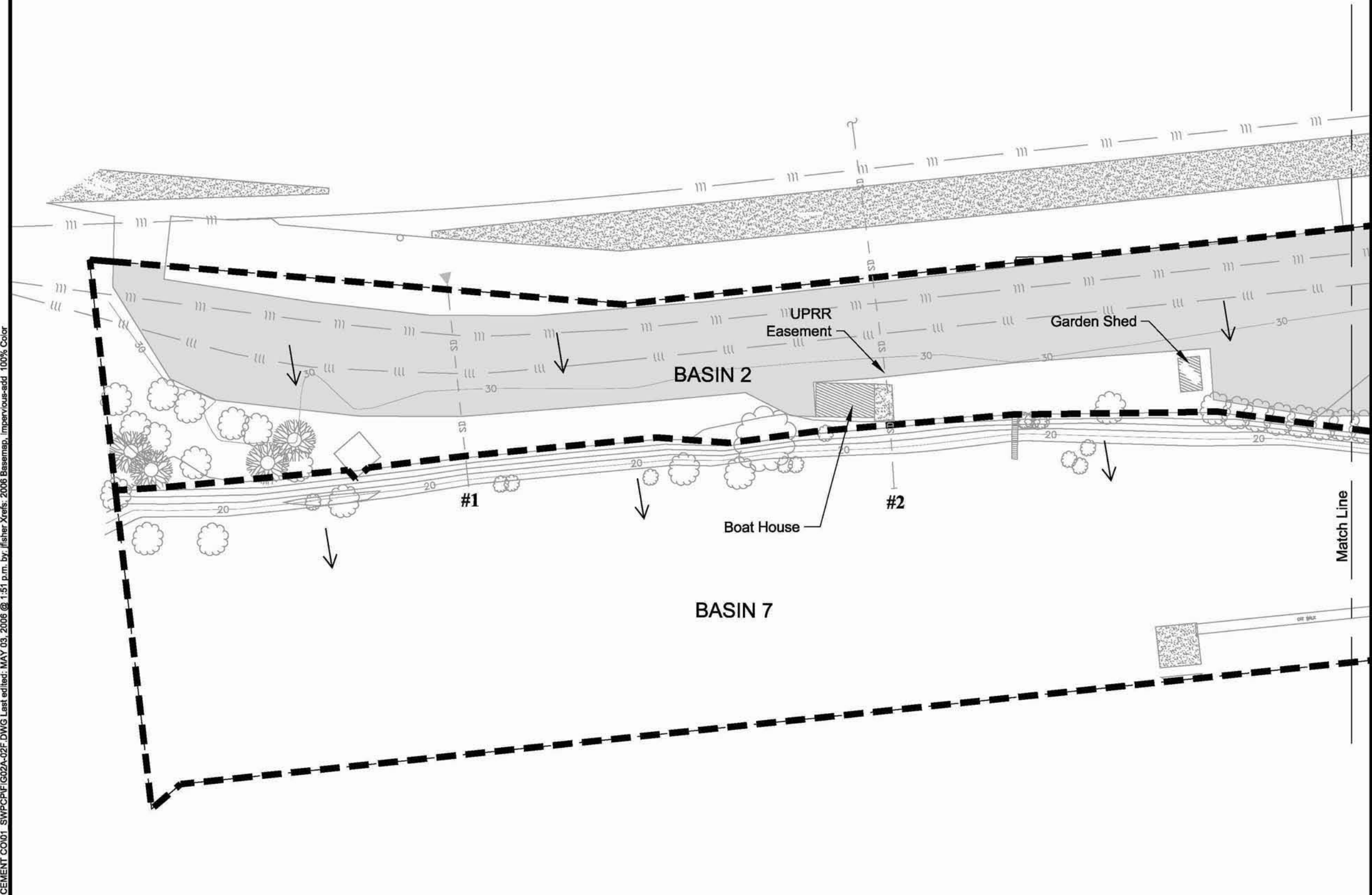
File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCRF\FIG01 SITE LOCATION.DWG Last edited: MAY 03, 2006 @ 1:55 p.m. by: jfisher Xrefs: none black/white



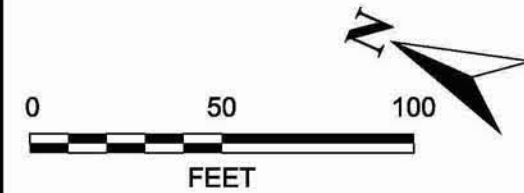


**Figure 2A**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**



- Legend:**
- Property Boundary
  - × Fence
  - ||| Railroad Tracks
  - #2** Outfall Location and Designation
  - ▲ Rock Collector (buried)
  - SD- Stormwater Line (not used by Ash Grove)
  - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Asphalt Pavement
  - Concrete
  - Buildings



**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

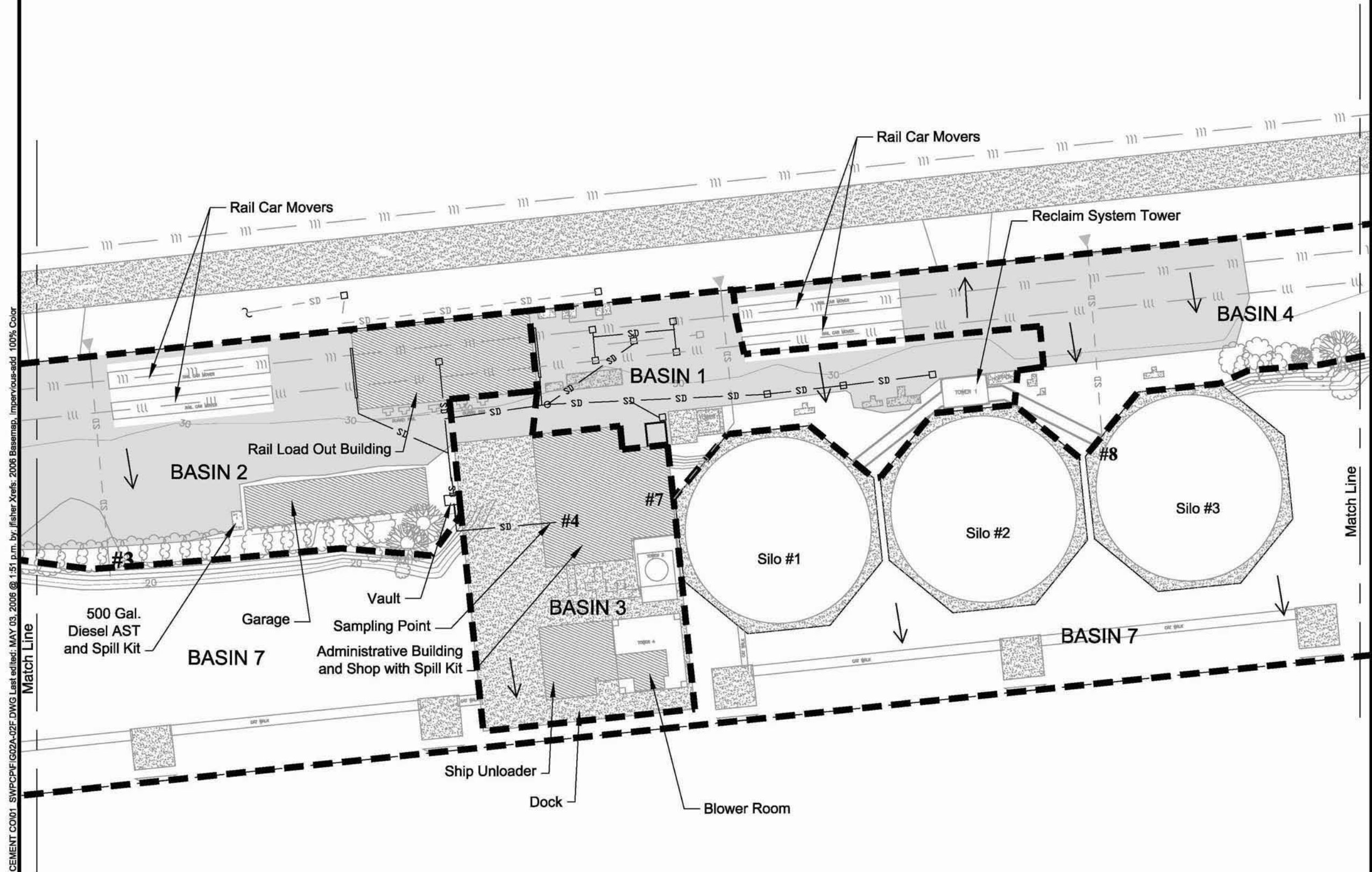
**MAUL FOSTER ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAinc.org

File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCPF\G02A-02F.DWG Last edited: MAY 03, 2006 @ 1:51 p.m. by: J. Fisher Xrefs: 2006 Basemap, Impervious-add 100% Color

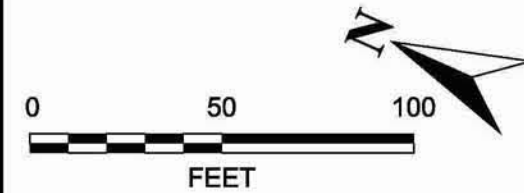


**Figure 2B**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**



- Legend:**
- Property Boundary
  - × Fence
  - ||| Railroad Tracks
  - #2** Outfall Location and Designation
  - ◀ Rock Collector (buried)
  - SD Ash Grove Stormwater Line (configuration estimated)
  - SD Stormwater Line (not used by Ash Grove)
  - Catch Basin
  - Manhole
  - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Asphalt Pavement
  - Concrete
  - Buildings



**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

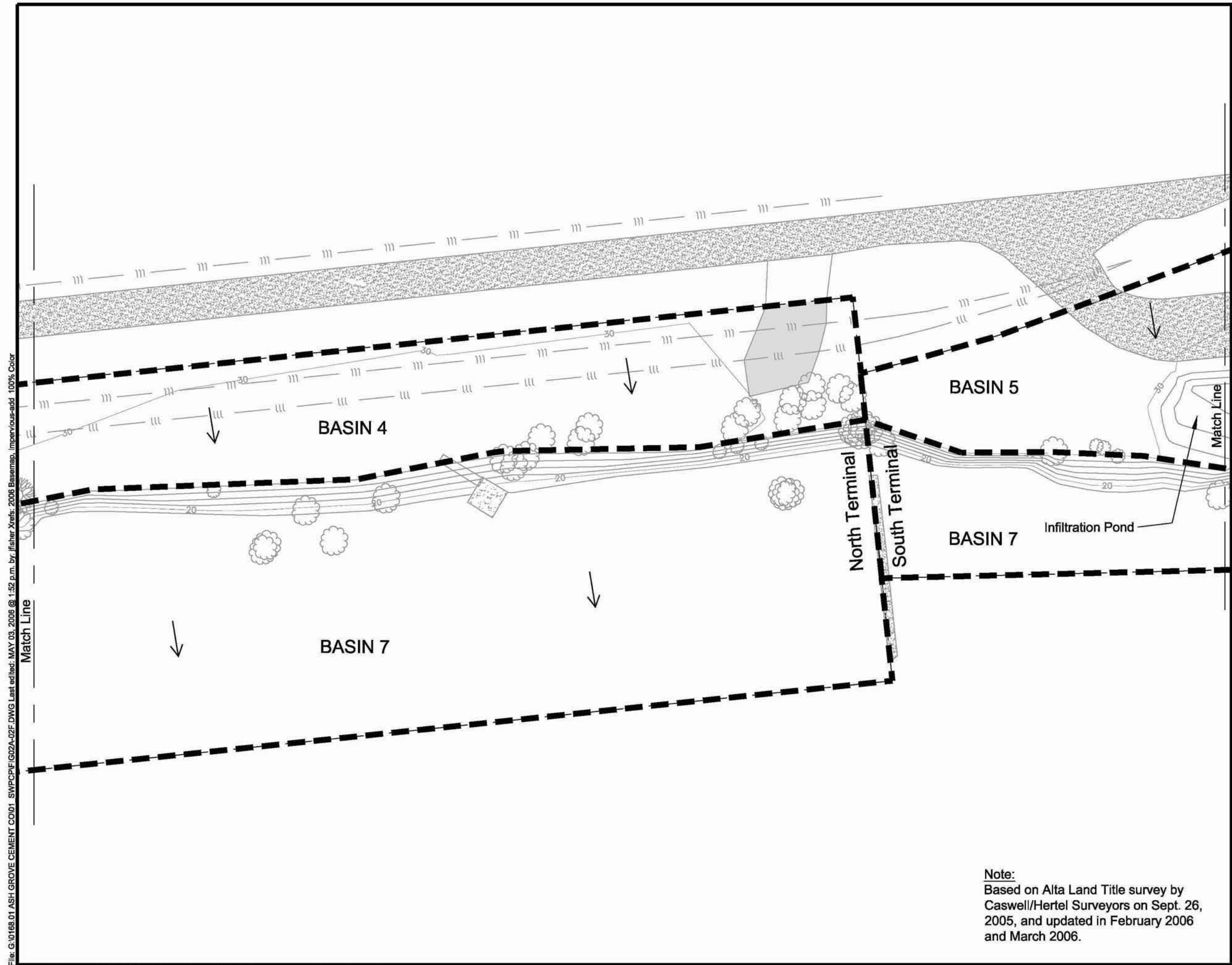
**MAUL FOSTER ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAinc.org

File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCPF\G02A-02F.DWG Last edited: MAY 03, 2006 @ 1:51 p.m. by: J. Fisher Xrefs: 2006 Basemap, Impervious-add 100% Color



**Figure 2C**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**



- Legend:**
- Property Boundary
  - × Fence
  - ||| Railroad Tracks
  - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete

**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

0 50 100  
FEET

**MAUL FOSTER ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAinc.org

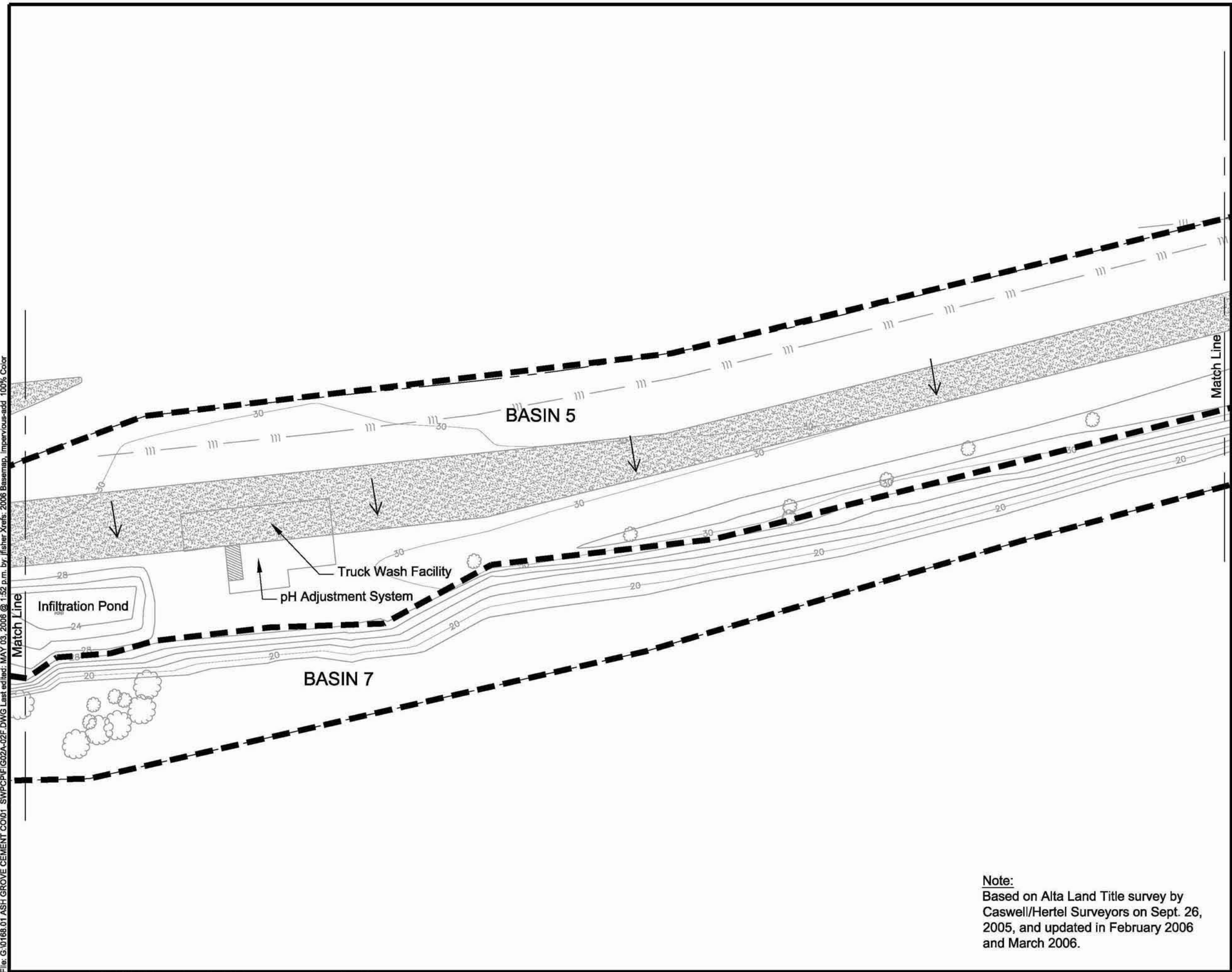
File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCPF\G02A-02F.DWG Last edited: MAY 03, 2006 @ 1:52 p.m. by: J. Fisher Xrefs: 2006 Basemap, Impervious-add 100% Color



**Figure 2D**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**

- Legend:**
- Property Boundary
  - × Fence
  - ||| Railroad Tracks
  - - - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete



**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

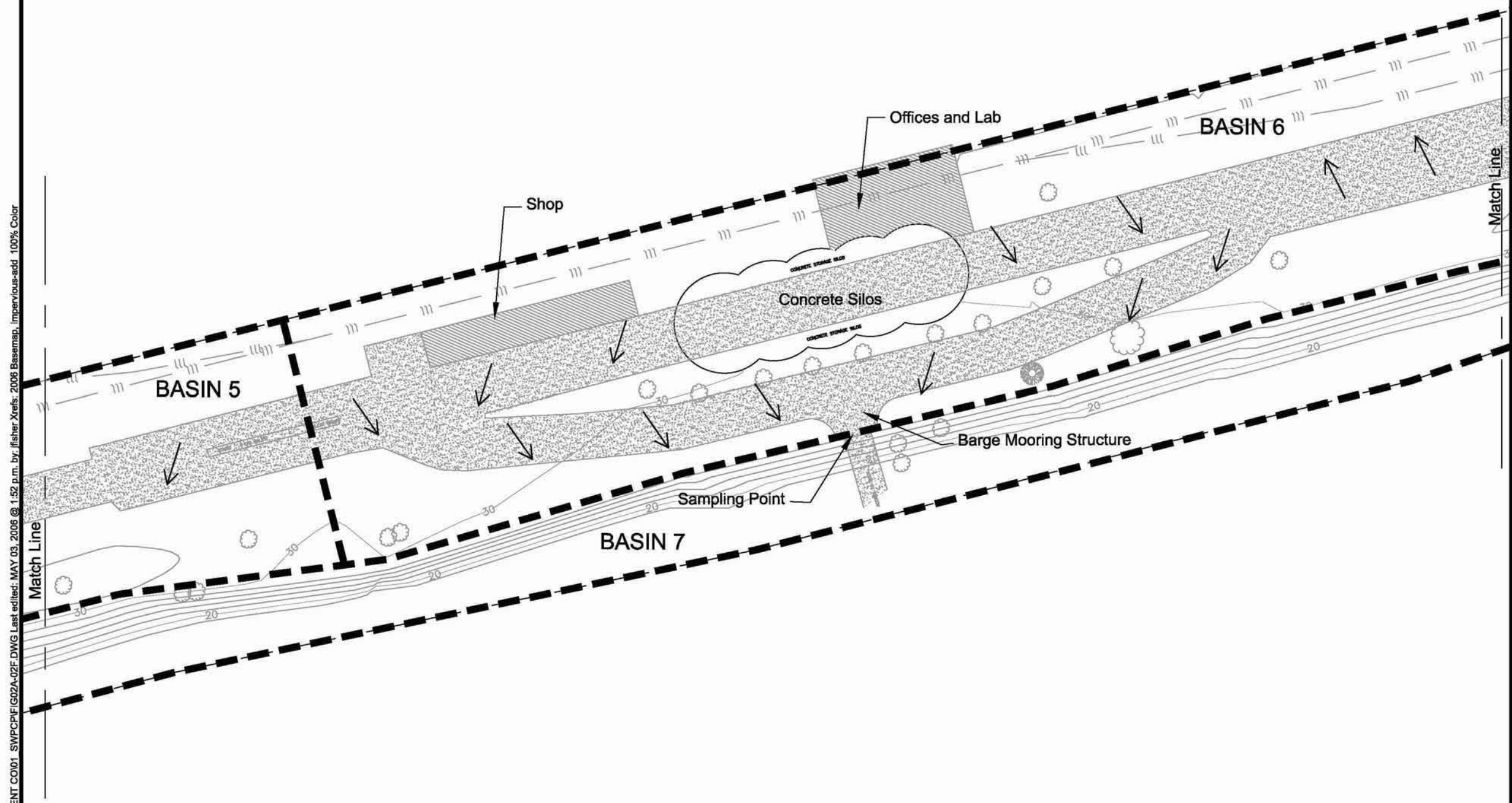
0 50 100  
FEET

**MAUL FOSTER ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAInc.org

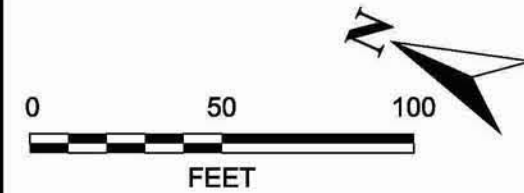
File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCPF\G02A-02F.DWG Last edited: MAY 03, 2006 @ 1:52 p.m. by: J. Fisher Xrefs: 2006 Basemap, Impervious-add 100% Color

**Figure 2E**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**



- Legend:**
- Property Boundary
  - x — Fence
  - ||| — Railroad Tracks
  - - - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete
  - Buildings



**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.



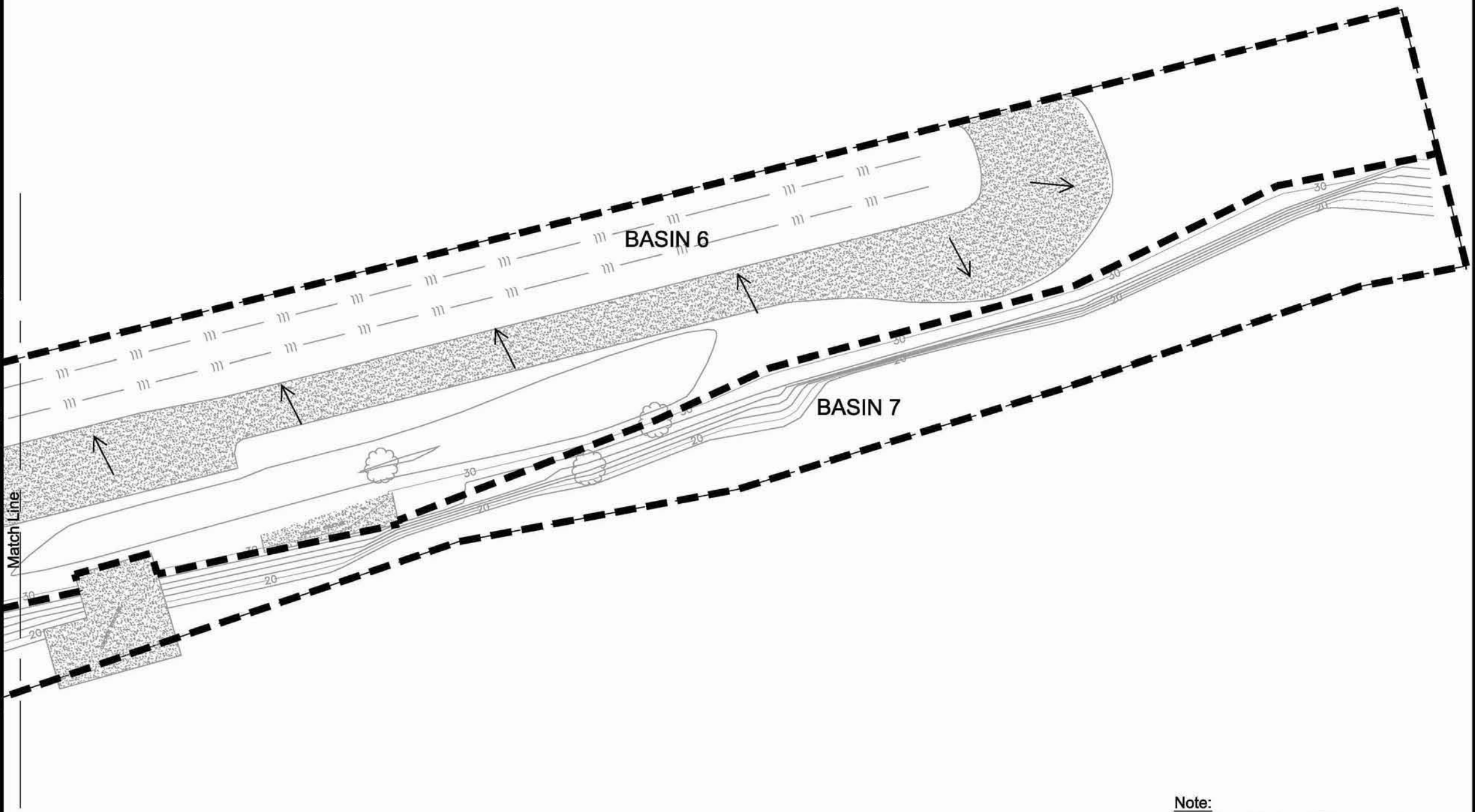
File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCP\FG02A-02F.DWG Last edited: MAY 03, 2006 @ 1:52 p.m. by: J. Fisher Xrefs: 2006 Basemap, Impervious-add 100% Color



**Figure 2F**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**

- Legend:**
- Property Boundary
  - Fence
  - Railroad Tracks
  - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete



**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

0 50 100  
FEET

**MAUL  
FOSTER  
ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAinc.org

File: G:\0168.01 ASH GROVE CEMENT CO\01 SWPCPF\G02A-02F.DWG Last edited: MAY 03, 2006 @ 1:53 p.m. by: J. Fisher Xrefs: 2006 BaseMap, Impervious-add 100% Color

**APPENDIX A**  
**1200-Z NPDES PERMIT**

GENERAL PERMIT  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
STORM WATER DISCHARGE PERMIT

Department of Environmental Quality  
811 Southwest Sixth Avenue, Portland, OR 97204  
Telephone: (503) 229-5630 or 1-800-452-4011 toll free in Oregon  
Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

---

ISSUED TO:

All Owners or Operators of Storm Water Point  
Source Discharges that are Covered by this  
Permit

---

SOURCES COVERED BY THIS PERMIT

Facilities identified in 40 Code of Federal Regulation (CFR) §122.26(b)(14)(i - ix, xi) with storm water discharges. See *Table 1: Sources Covered* on p. 2 for more information on the CFR regulated industries covered by this permit. Facilities may qualify for a conditional exclusion from the requirement to obtain coverage under a permit if there is no exposure of industrial activities and materials to storm water pursuant to 40 CFR §122.26(g); see *Permit Coverage and Exclusion from Coverage* on p. 3 for more information.

Construction activities, asphalt mix batch plants, concrete batch plants and Standard Industrial Classification code 14, *Mining and Quarrying of Nonmetallic Minerals, Except Fuels*, are excluded from this permit. These activities are regulated under separate permits.

---

Michael T. Llewelyn, Administrator  
Water Quality Division

Issued: July 26, 2002  
Effective: August 9, 2002

---

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate storm water treatment and/or control facilities, and to discharge storm water to public waters in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

	<u>Page</u>
Permit Coverage and Exclusion From Coverage .....	3
Schedule A - Storm Water Pollution Control Plan, Additional Requirements, Limitations, and Benchmarks .....	5
Schedule B - Monitoring and Reporting Requirements .....	10
Schedule C - Compliance Conditions and Schedules .....	12
Schedule D - Special Conditions .....	13
Schedule F - General Conditions .....	14

Unless specifically authorized by this permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharges to an underground injection control system.

**TABLE 1: SOURCES COVERED**

<p>Facilities with the following primary Standard Industrial Classification codes:</p> <ul style="list-style-type: none"> <li>10 Metal Mining</li> <li>12 Coal Mining</li> <li>13 Oil and Gas Extraction</li> <li>20 Food and Kindred Products</li> <li>21 Tobacco Products</li> <li>22 Textile Mill Products</li> <li>23 Apparel and Other Finished Products Made From Fabrics and Similar Material</li> <li>24 Lumber and Wood Products, Except Furniture (excluding 2491 Wood Preserving and 2411 Logging)</li> <li>25 Furniture and Fixtures</li> <li>27 Printing, Publishing and Allied Industries</li> <li>28 Chemicals and Allied Products (excluding 2874 Phosphate Fertilizer Manufacturing)</li> <li>29 Petroleum Refining and Related Industries</li> <li>30 Rubber and Miscellaneous Plastics Products</li> <li>31 Leather and Leather Products</li> <li>32 Stone, Clay, Glass, and Concrete Products</li> <li>33 Primary Metal Industries</li> <li>34 Fabricated Metal Products, Except Machinery and Transportation Equipment</li> <li>35 Industrial and Commercial Machinery and Computer Equipment</li> <li>36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment</li> <li>37 Transportation Equipment</li> <li>38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks</li> <li>39 Miscellaneous Manufacturing Industries</li> <li>4221 Farm Product Warehousing and Storage</li> <li>4222 Refrigerated Warehousing and Storage</li> <li>4225 General Warehousing and Storage</li> <li>5015 Motor Vehicle Parts, Used</li> <li>5093 Scrap and Waste Materials</li> </ul>
<p>Facilities with the following primary Standard Industrial Classification codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations:</p> <ul style="list-style-type: none"> <li>41 Local and Suburban Transit and Interurban Highway Passenger Transportation</li> <li>42 Motor Freight Transportation and Warehousing (excluding 4221 Farm Product Warehousing and Storage, 4222 Refrigerated Warehousing and Storage, and 4225 General Warehousing and Storage)</li> <li>43 United States Postal Service</li> <li>44 Water Transportation</li> <li>45 Transportation by Air</li> <li>5171 Petroleum Bulk Stations and Terminals</li> </ul>
<p>Steam Electric Power Generation including coal handling sites</p>
<p>Landfills, land application sites and open dumps [excluding landfills regulated by 40 CFR §445 that discharge "contaminated storm water" (as defined by 40 CFR §445.2) to waters of the U.S.]</p>
<p>Hazardous Waste Treatment, Storage and Disposal Facilities [excluding hazardous waste landfills regulated by 40 CFR §445 that discharge "contaminated storm water" (as defined by 40 CFR §445.2) to waters of the U.S.]</p>
<p>Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, recycling, and reclamation of municipal or domestic sewage (including land dedicated to the disposal of sewage sludge that are located within the confines of the facility) with the design flow capacity of 1.0 mgd or more, or required to have a pretreatment program under 40 CFR §403.</p>

## PERMIT COVERAGE AND EXCLUSION FROM COVERAGE

### 1. Application for General Permit Coverage

a) *New facilities and existing facilities obtaining coverage for the first time*

Owners or operators of sources covered by this permit must:

- i) Submit a complete copy of the Department-approved application form to the Department requesting coverage under this permit at least 180 days prior to the planned activity that will result in the discharge to waters of the state, unless otherwise approved by the Department.
- ii) Provide payment of all fees applicable to this permit prior to obtaining coverage.

b) *Renewal of permit coverage for existing permittees*

Owners or operators of sources covered by this permit must:

- i) Submit a complete copy of the Department approved application form 180 days prior to permit expiration, unless otherwise approved in writing by the Department.
- ii) Provide payment of all applicable fees for permit renewal.
- iii) The existing permit will continue to be in effect through administrative extension after the permit expiration date if a complete renewal application is submitted.

c) *Notification that permit coverage has been obtained*

- i) The Department will notify the applicant by mail that they have received coverage and is authorized to operate under the conditions of this permit.
- ii) If the applicant's operation cannot be approved for coverage under this permit, the applicant may apply for an individual permit.

### 2. "No Exposure" Conditional Exclusion from Permit Coverage

Application for permit coverage is not required to obtain the "No Exposure" conditional exclusion described below.

a) To qualify for this exclusion, the owner or operator must:

- i) Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff.
- ii) Complete and sign a certification, on a form approved by the Department, that there are no discharges of storm water contaminated by exposure to industrial materials and activities from the entire facility, except as provided in 40 CFR §122.26(g)(2).
- iii) Submit the signed certification to the Department once every five years.
- iv) Allow the Department to inspect the facility to determine compliance with the "no exposure" conditions, and allow the Department to make any "no exposure" inspection reports available to the public upon request.
- v) For facilities that discharge through a municipal separate storm sewer system (MS4), upon request, submit a copy of the "no exposure" certification to the MS4 operator (i.e., local municipality), as well as allow inspection and public reporting by the MS4 operator.
- vi) Use the Environmental Protection Agency (EPA) *Guidance Manual for Conditional Exclusion from Storm Water Permitting Based on "No Exposure" of Industrial Activities to Storm Water* (EPA 833-B-00-001, June 2000) to determine "no exposure."

b) Limitations for obtaining and/or maintaining the exclusion:

- i) This exclusion is available on a facility-wide basis only, not for individual outfalls. If a facility has some discharges of storm water that would otherwise be "no exposure" discharges, individual permit requirements should be adjusted accordingly.



- ii) If circumstances change and industrial materials or activities become exposed to rain, snow, snow melt, and/or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who anticipates changes in circumstances should apply for and obtain permit coverage prior to the change of circumstances.
- iii) The Department retains the authority to require permit coverage (and deny this exclusion) upon making a determination that the discharge causes, has reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.
- iv) The Department will notify the permittee in writing of its approval of the "no exposure" conditional exclusion and termination of permit coverage. The owner or operator must maintain this notification on site.



## SCHEDULE A STORM WATER POLLUTION CONTROL PLAN

### 1. **Preparation and Implementation of the Storm Water Pollution Control Plan (SWPCP)**

The permittee must prepare and implement the SWPCP according to the following:

- a) The SWPCP must be prepared according to the requirements in Schedule A.2 by a person knowledgeable in storm water management and familiar with the facility. The person(s) preparing the plan must be identified in the plan.
- b) The SWPCP must be signed in accordance with 40 CFR §122.22. Updates and revisions to the SWPCP must also be signed and certified pursuant to 40 CFR §122.22.
- c) The SWPCP must be prepared and implemented according to the time frames set forth in Schedule C.
- d) The SWPCP must be kept current and updated as necessary to reflect any changes in facility operation.
- e) The SWPCP and updates to the SWPCP must be submitted to the Department in accordance with Schedule B.3.
- f) A copy of the SWPCP must be kept at the facility and made available upon request to government agencies responsible for storm water management in the permittee's area.

### 2. **Storm Water Pollution Control Plan Requirements**

- a) **Site Description** The SWPCP must contain the following information:
  - i) A description of the industrial activities conducted at the site. Include a description of the significant materials (see Schedule D.3, Definitions) that are stored, used, treated and/or disposed of in a manner that allows exposure to storm water. Also describe the methods of storage, usage, treatment and/or disposal.
  - ii) A general location map showing the location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features.
  - iii) A site map including the following:
    - (1) drainage patterns
    - (2) drainage and discharge structures
    - (3) outline of the drainage area for each storm water outfall
    - (4) paved areas and buildings within each drainage area
    - (5) areas used for outdoor manufacturing, treatment, storage, and/or disposal of significant materials
    - (6) existing structural control measures for reducing pollutants in storm water runoff
    - (7) material loading and access areas
    - (8) hazardous waste treatment, storage and disposal facilities
    - (9) location of wells including waste injection wells, seepage pits, drywells, etc.
    - (10) location of springs, wetlands and other surface water bodies.
  - iv) Estimates of the amount of impervious surface area (including paved areas and building roofs) relative to the total area drained by each storm water outfall.
  - v) For each area of the site where a reasonable potential exists for contributing pollutants to storm water runoff, identify the potential pollutants that could be present in storm water discharges.
  - vi) The name(s) of the receiving water(s) for storm water drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters and the name of the municipality.
  - vii) Identification of the discharge outfall(s) and the point(s) where storm water monitoring will occur as required by Schedule B. If multiple discharge outfalls exist but will not all be monitored (as allowed in Schedule B.1.c), a description supporting this approach must also be included.

- b) **Site Controls** The permittee must maintain existing controls and/or develop new controls appropriate for the site. The purpose of these controls is to eliminate or minimize the exposure of pollutants to storm water. In developing a control strategy, the SWPCP must have the following minimum components. A description of each component must be included in the SWPCP.
- i) *Storm Water Best Management Practices* If technically and economically feasible, the following best management practices must be employed at the site. A schedule for implementation of these practices must be included in the SWPCP if the practice has not already been accomplished. This schedule must be consistent with the requirements for developing and implementing the SWPCP in Schedule C of the permit.
- (1) Containment - All hazardous substances (see Schedule D.3, Definitions) must be stored within berms or other secondary containment devices to prevent leaks and spills from contaminating storm water. If the use of berms or secondary containment devices is not possible, then hazardous substances must be stored in areas that do not drain to the storm sewer system.
  - (2) Oil and Grease - Oil/Water separators, booms, skimmers or other methods must be employed to eliminate or minimize oil and grease contamination of storm water discharges.
  - (3) Waste Chemicals and Material Disposal - Wastes must be recycled or properly disposed of in a manner to eliminate or minimize exposure of pollutants to storm water. All waste contained in bins or dumpsters where there is a potential for drainage of storm water through the waste must be covered to prevent exposure of storm water to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.
  - (4) Erosion and Sediment Control - Erosion control methods such as vegetating exposed areas, graveling or paving must be employed to minimize erosion of soil at the site. Sediment control methods such as detention facilities, sediment control fences, vegetated filter strips, bioswales, or grassy swales must be employed to minimize sediment loads in storm water discharges. For activities that involve land disturbance, the permittee must contact the local municipality to determine if there are other applicable requirements.
  - (5) Debris Control - Screens, booms, settling ponds, or other methods must be employed to eliminate or minimize debris in storm water discharges.
  - (6) Storm Water Diversion - Storm water must be diverted away from fueling, manufacturing, treatment, storage, and disposal areas to prevent exposure of uncontaminated storm water to potential pollutants.
  - (7) Covering Activities - Fueling, manufacturing, treatment, storage, and disposal areas must be covered to prevent exposure of storm water to potential pollutants. Acceptable covers include, but are not limited to, permanent structures such as roofs or buildings and temporary covers such as tarps.
  - (8) Housekeeping - Areas that may contribute pollutants to storm water must be kept clean. Sweeping, prompt clean up of spills and leaks, and proper maintenance of vehicles must be employed to eliminate or minimize exposure of storm water to pollutants.
- ii) *Spill Prevention and Response Procedures* Methods to prevent spills along with clean-up and notification procedures must be included in the SWPCP. These methods and procedures must be made available to appropriate personnel. The required clean up

material must be on-site or readily available. Spills prevention plans required by other regulations may be substituted for this provision providing that storm water management concerns are adequately addressed.

- iii) *Preventative Maintenance* A preventative maintenance program must be implemented to ensure the effective operation of all storm water best management practices. At a minimum the program must include:
    - (1) Monthly inspections of areas where potential spills of significant materials or industrial activities could impact storm water runoff.
    - (2) Monthly inspections of storm water control measures, structures, catch basins, and treatment facilities.
    - (3) Cleaning, maintenance and/or repair of all materials handling and storage areas and all storm water control measures, structures, catch basins, and treatment facilities as needed upon discovery. Cleaning, maintenance, and repair of such systems must be performed in such a manner as to prevent the discharge of pollution.
  - iv) *Employee Education* An employee orientation and education program must be developed and maintained to inform personnel of the components and goals of the SWPCP. The program must also address spill response procedures and the necessity of good housekeeping practices. A schedule for employee education must be included in the SWPCP. The Department recommends this education and training occur at the time of an employee's hire and annually thereafter.
- c) **Record Keeping and Internal Reporting Procedures** The following information must be recorded and maintained at the facility and provided to the Department and other government agencies upon request. This information does not need to be submitted as part of the SWPCP.
- i) Inspection, maintenance, repair and education activities as required by the SWPCP.
  - ii) Spills or leaks of significant materials that impacted or had the potential to impact storm water or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

### ADDITIONAL REQUIREMENTS

- 3. **Oregon Administrative Rule 340-041-0026(3)(a)(D), Surface Water Temperature Management Plan** Individual storm water discharges are not expected to cause a measurable increase in stream temperature because the storm water discharges mainly occur at a time of year when ambient stream and runoff temperatures are relatively low. Compliance with this permit meets the requirement of OAR 340-041-0026(3)(a)(D) to develop and implement a surface water temperature management plan. If permitted storm water discharges in a particular basin are assigned waste load allocations under a Total Maximum Daily Load for temperature, then permittees in this basin will be required to implement additional management practices to reduce the temperature of the discharges. These practices include, but are not limited to, increased vegetation to provide for shading, underground conveyance systems or detention vaults, and filter treatment systems to reduce detention times.
- 4. **Storm Water Only** This permit only regulates the discharge of storm water. It does not authorize the discharge or on-site disposal of process wastewater, wash water, boiler blowdown, cooling water, air conditioning condensate, deicing residues, or any other non-storm discharges associated with the facility. The Department recommends that piping and drainage systems for floor drains and other process wastewater discharge points be separated from the storm drainage system to prevent inadvertent discharge of pollutants to waters of the state.

Any other wastewater discharge or disposal must be permitted in a separate permit. A separate Department permit may not be required if the wastewater is reused or recycled without discharge or disposal, or discharged to the sanitary sewer with approval from the local sanitary authority.

5. **Water Quality Limited Streams** - If Total Maximum Daily Loads are established and the discharge from a permitted source is assigned a waste load allocation, application for an individual or different general permit or other appropriate tools may be required to address the allocation.
6. **Water Quality Standards** The ultimate goal for permittees is to comply with water quality standards in OAR 340-041. In instances where a storm water discharge adversely impacts water quality, the Department may require the facility to implement additional management practices, apply for an individual permit, or take other appropriate action.

#### CODE OF FEDERAL REGULATION STORM WATER DISCHARGE LIMITATIONS

7. The permittee with the following activities must be in compliance with the applicable limitations at the time of permit assignment:

CFR Industry		Parameter	Limitation	
Category	Subcategory			
Cement manufacturing (40 CFR §411)	Materials storage piles runoff	pH	6.0 - 9.0 SU	
		Total Suspended Solids (TSS)	50 mg/l	
Steam powered electric power generating (40 CFR §423)	Coal pile runoff	TSS	50 mg/l, Daily Maximum	
Paving and roofing materials (tars and asphalt) (40 CFR §443)	Runoff from manufacturing of asphalt paving or roofing emulsion	Oil & Grease	20 mg/l, Daily Maximum	15 mg/l, 30 Day Average
		pH	6.0 - 9.0 SU	

## STORM WATER DISCHARGE BENCHMARKS

8. **Benchmarks** Benchmarks are guideline concentrations not limitations. They are designed to assist the permittee in determining if the implementation of their SWPCP is reducing pollutant concentrations to below levels of concern. For facilities that are subject to federal limitations, benchmarks apply to only those pollutants that are not limited by the federal regulations. The following benchmarks apply to each point source discharge of storm water associated with industrial activity:

Parameter	Benchmark
Total Copper	0.1 mg/l
Total Lead	0.4 mg/l
Total Zinc	0.6 mg/l
pH	5.5 – 9.0 SU
Total Suspended Solids	130 mg/l
Total Oil & Grease	10 mg/l
E. coli**	406 counts/100 ml
Floating Solids (associated with industrial activities)	No Visible Discharge
Oil & Grease Sheen	No Visible Sheen

\*\* The benchmark for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

9. **Review of SWPCP** If benchmarks are not achieved, the permittee must investigate the source of the elevated pollutant levels and review and, if necessary, revise the SWPCP within 60 days of receiving sampling results. The purpose of this review is to determine if the SWPCP is being followed and to identify any additional technically and economically feasible site controls that need to be implemented to further improve the quality of storm water discharges. These site controls include best management practices, spill prevention and response procedures, preventative maintenance, and employee education procedures as described in Schedule A.2.b.
- SWPCP Revision** Any newly identified site controls must be implemented in a timely manner and incorporated into the SWPCP as an update. A new SWPCP is not required. If no additional site controls are identified, the permittee must state as such in an update to the SWPCP.
  - SWPCP Revision Submittal** Results of this review must be submitted to the Department in accordance with Schedule B.3 and made available upon request to government agencies responsible for storm water management in the permittee's area.
  - Background or Natural Conditions** If the permittee demonstrates that background or natural conditions not associated with industrial activities at the site cause an exceedance of a benchmark, then no further modifications to the SWPCP are required for that parameter. Upon successful demonstration of natural or background conditions through monitoring of the same storm event used to evaluate benchmarks the permittee would be eligible for the monitoring reduction as outlined in Schedule B.2.



**SCHEDULE B  
MONITORING AND REPORTING REQUIREMENTS**

**1. Minimum Monitoring Requirements**

- a) All permittees must monitor storm water associated with industrial activity for the following:

<b>GRAB SAMPLES OF STORM WATER</b>	
<b>Parameter*</b>	<b>Frequency</b>
Total Copper	Twice per Year
Total Lead	Twice per Year
Total Zinc	Twice per Year
pH	Twice per Year
Total Suspended Solids	Twice per Year
Total Oil & Grease	Twice per Year
E. coli**	Twice per Year

\* Parameters should be analyzed on samples collected from the same storm event.

\*\* The monitoring for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

<b>VISUAL MONITORING OF STORM WATER</b>	
<b>Parameter</b>	<b>Frequency</b>
Floating Solids (associated with industrial activities)	Once a Month (when discharging)
Oil & Grease Sheen	Once a Month (when discharging)

- b) **Grab Samples** Grab samples that are representative of the discharge must be taken at least 60 days apart. It is preferred, but not required, that one sample be collected in the fall and one in the spring. Compositing of samples from different drainage areas is not allowed.
- c) **Multiple Point Source Discharges** The permittee may reduce the number of storm water monitoring points provided the outfalls have substantially identical effluents. Substantially identical effluents are discharges from drainage areas serving similar activities where the discharges are expected to be similar in composition. Outfalls serving areas with no exposure of storm water to industrial activities are not required to be monitored.
- d) **Monitoring Location** All samples must be taken at monitoring points specified in the SWPCP before the storm water joins or is diluted by any other wastestream, body of water or substance unless otherwise approved in writing by the Department.

**2. Monitoring Reduction**

- a) **Visual Observations** There is no reduction allowed of the required visual observations.
- b) **Grab Samples** The permittee is not required to conduct sampling if the benchmarks specified in Schedule A.8 are met, or if the exceedance is due to natural or background conditions for at least four consecutive storm water monitoring events conducted by the permittee over 24 continuous months. Note that there is no reduction in monitoring allowed for facilities subject to limitations under CFR (Schedule A.7).
- i) Results from sampling events cannot be averaged to meet the benchmarks.
- ii) Monitoring waivers may be allowed for individual parameters.

- iii) Parameters in exceedance or not previously sampled must be monitored as required in Schedule B.1 until the monitoring waiver condition above is met.
- iv) Monitoring data from the previous permit period may be used to meet the waiver requirement. This data must be evaluated against the benchmarks specified in this permit.
- v) Monitoring data from the same storm event must be used to demonstrate that background or natural conditions not associated with industrial activities at the site are contributing to the exceedance of a benchmark.
- vi) The permittee must submit written notification to the Department when exercising the monitoring waiver condition (refer to Schedule B.3.b).

c) **Reinstatement of Monitoring Requirements**

- i) The permittee must conduct monitoring as specified in Schedule B.1 if changes to site conditions are expected to affect storm water discharge characteristics.
- ii) The Department may reinstate monitoring requirements as specified in Schedule B.1 if prior monitoring efforts were improper or results were incorrect. The Department will notify the permittee of reinstatement in writing.
- iii) Monitoring may also be reinstated if future sampling efforts by the permittee or the Department indicate benchmarks are being exceeded.
- iv) If no monitoring was performed during the previous permit period, the permittee must reinitiate monitoring as specified in Schedule B.1 to qualify for the monitoring reduction allowed in Schedule B.2.

3. **Reporting Requirements** The permittee must submit the following to the appropriate DEQ regional office (DEQ will provide regional office information when the permittee is notified that permit coverage has been obtained):

- a) **Monitoring Data** The permittee must submit by July 15 of each year grab sampling and visual monitoring data for the previous monitoring period (July 1- June 30). If there was insufficient rainfall to collect samples, the permittee must notify the Department by July 15 of each year. The permittee must also report the minimum detection levels and analytical methods for the parameters analyzed.
- b) **Monitoring Reduction Notification** The permittee must submit written notification when exercising the monitoring reduction condition in Schedule B.2.b.
- c) **Initial Completion or Update of SWPCP** The permittee must prepare or update the SWPCP in accordance with Schedule C of the permit. The permittee must submit an updated or completed SWPCP within 14 days after completion.
- d) **SWPCP Revision (when benchmarks are exceeded)** The permittee must submit any revisions to the SWPCP required by Schedule A.9 within 14 days after the SWPCP is revised. If the Department does not review and comment on the revised SWPCP within 30 days, the permittee must implement the revisions as proposed. The permittee may proceed immediately with implementation of the following management practices as described in Schedule A.2.b without waiting for Department comment: waste chemical and materials disposal, debris control, storm water diversion, covering activities, housekeeping, and preventative maintenance.

**SCHEDULE C  
COMPLIANCE CONDITIONS AND SCHEDULES**

1. **Existing Permittee** (for a facility with an NPDES storm water discharge permit assigned prior to June 30, 2002):
  - a) Not later than 90 days after receiving this permit, the existing permittee must revise and begin implementation of the SWPCP to meet any new permit requirements.
  - b) Except for site controls that require capital improvements (see Schedule D.3, Definitions), the SWPCP must be implemented within 90 days after revision of SWPCP. Site control activities that require capital improvements must be completed in accordance with the schedule set forth in the SWPCP.
2. **New Permittee with Existing Facility** (for a facility operating prior to June 30, 2002, without an NPDES storm water discharge permit):
  - a) Not later than 90 days after receiving this permit, the new permittee must prepare and begin implementation of the SWPCP.
  - b) Except for site controls that require capital improvements (see Schedule D.3, Definitions), the SWPCP must be implemented within 90 days after completion of SWPCP. Site control activities that require capital improvements must be completed in accordance with the schedule set forth in the SWPCP.
3. **New Permittee with New Facility** (for a facility beginning operation after June 30, 2002):
  - a) Prior to starting operations, a new permittee must prepare and begin implementation of the SWPCP.
  - b) Except for site controls that require capital improvements (see Schedule D.3, Definitions), the SWPCP must be implemented within 90 days after beginning operation. Site control activities that require capital improvements must be completed in accordance with the schedule set forth in the SWPCP.
4. **New Permittee Discharging to Clackamas River, McKenzie River above Hayden Bridge (River Mile 15) or North Santiam River.** Not later than 180 days after receiving this permit, new permittees discharging to Clackamas River, McKenzie River above Hayden Bridge (river mile 15) or North Santiam River must submit to the Department a monitoring and water quality evaluation program. This program must be effective in evaluating the in-stream impacts of the discharge as required by OAR 340-041-0470. Within 30 days after Department approval, the permittee must implement the monitoring and water quality evaluation program. For the purpose of this condition, new permittees include potential or existing dischargers that did not have a permit prior to January 28, 1994, and existing dischargers that have a permit but request an increased load limitation.



**SCHEDULE D  
SPECIAL CONDITIONS**

1. **Releases in Excess of Reportable Quantities.** This permit does not relieve the permittee of the reporting requirements of 40 CFR §117 Determination of Reportable Quantities for Hazardous Substances and 40 CFR §302 Designation, Reportable Quantities, and Notification.
2. **Availability of SWPCP and Monitoring Data.** The Storm Water Pollution Control Plan and/or storm water monitoring data must be made available to government agencies responsible for storm water management in the permittee's area.
3. **Definitions**
  - a) *Capital Improvements* means the following improvements that require capital expenditures:
    - i) Treatment best management practices including but not limited to settling basins, oil/water separation equipment, catch basins, grassy swales, detention/retention basins, and media filtration devices.
    - ii) Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
    - iii) Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of storm water to treatment systems.
    - iv) Roofs and appropriate covers for manufacturing areas.
  - b) *Hazardous Substances* as defined in 40 CFR §302 Designation, Reportable Quantities, and Notification.
  - c) *Material Handling Activities* include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.
  - d) *Point Source* means a discharge from any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, or conduit.
  - e) *Significant Materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with storm water discharges.
4. **Local Public Agencies Acting as the Department's Agent**

The Department authorizes local public agencies to act as its Agent in implementing this permit. The Department's Agent may be authorized to conduct the following activities, including but not limited to: application review and approval, inspections, monitoring data review, storm water and wastewater monitoring, SWPCP review, and verification and approval of no-exposure certifications. Where the Department has entered into such an agreement, the Department or its Agent will notify the permittee of where to submit monitoring data, SWPCPs, no-exposure certifications, and other notifications or correspondence associated with this permit.

## SCHEDULE F NPDES GENERAL CONDITIONS

### SECTION A. STANDARD CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations

Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to \$10,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution, if committed by a person with criminal negligence, is punishable by a fine of up to \$25,000 or by imprisonment for not more than one year, or by both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, a person who knowingly discharges, places or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape into the waters of the state, is subject to a Class B felony punishable by a fine not to exceed \$200,000 and up to 10 years in prison.

3. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply to have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- d. The permittee shall pay the fees required to be filed with this permit application and to be paid annually for permit compliance determination as outlined in the Oregon Administrative Rules, Chapter 340, Division 045.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permittee must comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

**SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

1. Proper Operation and Maintenance

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a. Definitions

- (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

- (1) Bypass is prohibited unless:
  - (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
  - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
  - (c) The permittee submitted notices and requests as required under General Condition B.3.c.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

c. Notice and request for bypass.

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior written notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset

- a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (1) An upset occurred and that the permittee can identify the causes(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The permittee submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
  - (4) The permittee complied with any remedial measures required under General Condition A.3 hereof.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event

For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter must be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

- a. Definitions
  - (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
  - (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
  - (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.
- b. Prohibition of overflows. Overflows are prohibited unless:
  - (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
  - (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
  - (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.
- c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.
- d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee must take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.



8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

**SECTION C. MONITORING AND RECORDS**

1. Representative Sampling

Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than  $\pm 10$  percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit must, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years or both.

5. Reporting of Monitoring Results

Monitoring results must be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value must be recorded unless otherwise specified in this permit.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

8. Retention of Records

Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which must be retained for a period of at least five years (or longer as required by 40 CFR §503), the permittee must retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information must include:

- a. The date, exact place, time and methods of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

10. Inspection and Entry

The permittee must allow the Director, or an authorized representative upon the presentation of credentials to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

**SECTION D. REPORTING REQUIREMENTS**

1. Planned Changes

The permittee must comply with Oregon Administrative Rules (OAR) 340, Division 052, "Review of Plans and Specifications". Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers must be commenced until the plans and specifications are submitted to and approved by the Department. The permittee must give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittee must give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit must be transferred to a third party without prior written approval from the Director. The permittee must notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting

The permittee must report any noncompliance which may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office must be called. Outside of normal business hours, the Department must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission must also be provided within 5 days of the time the permittee becomes aware of the circumstances. If the permittee is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission must contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected;
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and

- e. Public notification steps taken, pursuant to General Condition B.7.

The following must be included as information which must be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
- b. Any upset which exceeds any effluent limitation in this permit.
- c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permittee must report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports must contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected; and
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permittee must furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee must also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it must promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department must be signed and certified in accordance with 40 CFR §122.22.

9. Falsification of Reports

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed \$100,000 per violation and up to 5 years in prison.

10. Changes to Indirect Dischargers - [Applicable to Publicly Owned Treatment Works (POTW) only]

The permittee must provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;
- b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For the purposes of this paragraph, adequate notice must include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

11. Changes to Discharges of Toxic Pollutant - [Applicable to existing manufacturing, commercial, mining, and silvicultural dischargers only]

The permittee must notify the Department as soon as they know or have reason to believe of the following:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:
  - (1) One hundred micrograms per liter (100 µg/l);
  - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
  - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
  - (4) The level established by the Department in accordance with 40 CFR §122.44(f).

- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
  - (4) The level established by the Department in accordance with 40 CFR §122.44(f).

#### **SECTION E. DEFINITIONS**

1. BOD means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. mg/l means milligrams per liter.
4. kg means kilograms.
5. m<sup>3</sup>/d means cubic meters per day.
6. MGD means million gallons per day.
7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
8. FC means fecal coliform bacteria.
9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR §125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
10. CBOD means five day carbonaceous biochemical oxygen demand.
11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
12. Quarter means January through March, April through June, July through September, or October through December.
13. Month means calendar month.
14. Week means a calendar week of Sunday through Saturday.
15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
17. POTW means a publicly owned treatment works.



**APPENDIX B**

**SWPCP REVIEW AND REVISION DOCUMENTATION FORM**

## **SWPCP REVIEW AND REVISION DOCUMENTATION FORM**

---

This Stormwater Pollution Control Plan (SWPCP) will be revised and updated as necessary to include modifications of site conditions, new or revised regulatory requirements, and additional on-site stormwater pollution controls. It shall be modified whenever there is a change in design, construction, operation, or maintenance that causes the Plan to be less effective in controlling the pollutants.

All revisions to the SWPCP should be documented and should be included in the original report as Appendix B, Plan Review and Revision Documentation Form. The Plan Review and Revision Documentation Form should be used to record the date, author, name, and signature of the facility representative that authorized the revision. The authorized facility representative should be an individual at or near the top of the facility's management organization, such as the facility manager or environmental manager. The signature of the authorized facility representative attests that the revision information is true and accurate. Previous authors are not responsible for the new revisions.

### **Plan Review and Revision Documentation Form**

<b>Revision Number</b>	<b>Revision Date</b>	<b>Revision Author</b>	<b>Facility Representative's Signature</b>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			

**APPENDIX C**  
**VISUAL MONITORING LOG**

**Visual Monitoring Log  
Ash Grove Cement  
NPDES Permit File No. 107213**

**Monitoring Location:** \_\_\_\_\_

Month	Monitoring Date	Oil and Grease Sheen Present? (Yes/No)	Color or Floating Solids Present? (Yes/No)	Action Taken	Sampler's Initials
July					
August					
September					
October					
November					
December					
January					
February					
March					
April					
May					
June					

For months when no discharges occur, write in "No Discharge" for that month.

**Signature Requirement**

I certify, under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

**Signature of Responsible Official:** \_\_\_\_\_

**Name and Title (Please Print):** \_\_\_\_\_

**Date of Signature:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_

**APPENDIX D**

**SPILL INCIDENT REPORT FORM AND EMERGENCY CONTACTS**

## **EMERGENCY RESPONSE CONTACT LIST**

---

The following space is a list of names and telephone numbers of those persons and agencies whose services may be required in the event of a release of significant material.

### **SWPCP Implementor and Back-up**

John Hone, Terminal Manager	Office: (503) 285-4621	Cell: (503) 784-3463
Glenn Dollar, Environmental Health and Safety Manager	Office: (503) 286-1677	

### **Health and Safety**

Fire Department	Emergency: 911
Police Department	Emergency: 911
Local Rescue Unit	Emergency: 911
Good Samaritan Hospital	Emergency: (503) 686-6931

### **Environmental Agencies**

DEQ Portland Main Office	(800)452-4011
DEQ Northwest Regional Office	(503) 229-5263
Oregon Emergency Response System	In Oregon: (800) 452-0311 Outside Oregon: (503) 378-6377

### **Hazardous Materials Spills**

To report spills of reportable quantities (RQs) of oil or hazardous materials:

National Response Center (NRC): (800) 424-8802





**APPENDIX E**  
**MONTHLY STORM WATER INSPECTION LOG**

## **MONTHLY STORM WATER INSPECTION LOG**

---

Ash Grove's SWPCP Plan Implementor shall sign and date the inspection log upon completion of monthly inspections and maintenance on the storm water controls identified below:

### **Containment**

- The 500-gallon diesel AST and fueling area containment shall be inspected for leaks, cracks, and general operating condition. Repairs and maintenance shall be performed as required. Absorbent material and oil booms should be present near the fueling area
- The garage shall be inspected, maintained, cleaned, and secured. All drip pans, drums, and tanks shall be inspected. Leaks and spills shall be removed and properly disposed, cleaned, and replaced.
- Any spill shall be recorded on the Spill Incident Report Form.

### **Waste Chemicals and Material Disposal**

- Used absorbent materials used in cleanup shall be disposed in an approved manner. Waste petroleum products and coolants collected from throughout the site shall be consolidated for recycling and disposed as required in an approved manner.

### **Debris, Sediment, and Oil Controls**

- All rain gutters and downspouts shall be kept free of debris and sediment.
- All paved surfaces, catch basins, outfalls, manhole, vault and drainage pipes shall be kept free of debris and sediment.
- The pneumatic system shall be inspected, cleaned, maintained, and secured as required. All cement and alumina residue shall be returned to the cleanup drums in the rail load-out building.

## **Covering Activities**

- Wherever practical, materials shall be stored under covered areas to prevent contact with storm water.
- Collect and consolidate miscellaneous waste products from throughout the site and store under cover in the rail load-out building.

# Monthly Storm Water Inspection Log

Date Inspected: \_\_\_\_\_

Signature \_\_\_\_\_

**Spill Kits** All present and properly stocked

(yes/no)

## Containment

Equipment Fueling Area (500-gallon diesel AST) clean, with no appreciable staining or noticeable spillage?

(yes/no)

Garage and Oil Storage Area clean, with no appreciable staining or noticeable spillage?

(yes/no)

Availability of drip pans

(adequate/not adequate)

Absorbent Materials

(adequate/not adequate)

## Debris, Sediment, and Oil Controls

Rail Loadout Building downspouts (north terminal) connected property and free of obstruction?

(yes/no)

Garage downspouts (north terminal) connected property and free of obstruction?

(yes/no)

Administration Office and Shop downspouts (north terminal) connected property and free of obstruction?

(yes/no)

Boat House downspouts connected property and free of obstruction?

(yes/no)

Offices and Lab downspouts (south terminal) connected property and free of obstruction?

(yes/no)

Shop downspouts (south terminal) connected property and free of obstruction?

(yes/no)

Rail Loadout Building trench drains and catch basin clean and free of debris?

(yes/no), if no indicate problem areas and date maintained below

Catch Basins Between tracks south of loadout building clean and free of debris?

(yes/no), if no indicate problem areas and date maintained below

Four Catch Basins along road surface east of silos clean and free of debris?

(yes/no), if no indicate problem areas and date maintained below

Manhole and vault clean and free of debris?

(yes/no), if no indicate problem areas and date maintained below

Parking Lot and Road Surfaces - any excessive debris present?

(yes/no), if yes indicate problem areas and date maintained below

Vegetated Areas - any excessive erosion present?

(yes/no), if yes indicate problem areas and date maintained below

## Covering Activities

Pneumatic System and conveyors are clean and properly operating?

(yes/no), if no indicate problem areas and date maintained below

## Notes and Miscellaneous observations:

**APPENDIX F**  
**EMPLOYEE TRAINING DOCUMENTATION**

## APPENDIX F EMPLOYEE TRAINING FORM

---

Ash Grove shall provide training for all personnel regarding the SWPCP using any medium or forum appropriate for such education. The following topics are to be included with any program addressing storm water regulations. Signature below indicates that policies and procedures related to the listed topic are understood.

<u>Topic</u>	<u>Date Covered</u>	<u>Signature</u>
Goals and Purpose of the Plan	_____	_____

- Prevent contamination of storm water discharge into waters.

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Promote cleaner and safer industrial activities

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Materials Management Practices	_____	_____
--------------------------------	-------	-------

- Spill Prevention and Response Procedures

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Preventive maintenance

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Storm Water Management	_____	_____
------------------------	-------	-------

- Containment, oil and grease separation, sediment control, chemical waste disposal, and storm water diversion.

Comments: \_\_\_\_\_  
\_\_\_\_\_



ENVIRONMENTAL & ENGINEERING CONSULTANTS

7223 NE Hazel Dell Avenue, Suite B | Vancouver, Washington 98665 | Phone 360.694.2691 | Fax 360.906.1958 | [www.MFAinc.org](http://www.MFAinc.org)

10 CELEBRATING  
YEARS  
1996-2006

June 29, 2006

Project No. 0168.01.02

Bob Vantuyt  
Ash Grove Cement  
3737 North Port Center Way  
Portland, OR

Re: Status of Ash Grove Portland North Terminal stormwater system upgrades design

Dear Mr. Vantuyt:

At your request, Maul Foster and Alongi, Inc. (MFA) has prepared this letter to describe the status of the stormwater treatment system upgrade design for the Ash Grove Cement North Terminal located at 3737 North Port Center Way, Portland, Oregon.

Please note that MFA has not completed a design for stormwater rerouting at the South Terminal. MFA completed site visits at the south terminal and has discussed potential options with you, John Hone, and Glenn Dollar. However, the recently-completed Stormwater Pollution Control Plan added a sampling point for the sheet flow from the South Terminal, so re-routing may not be necessary. In addition, Mr. Hone has said that the City of Portland is planning to do some sewer construction work at the south terminal that may impact any modifications that are completed in this area.

### **Drainage Basins and Flow Rates**

Stormwater from two drainage areas was considered in the design of the pH adjustment system. The two drainage basins include: the impervious area currently draining to Outfall 4 (Basin 1); and the piling-supported dock (Basin 2) (see Figure C1). MFA was informed today by Glenn Dollar that there may be an additional discharge to the stormwater system from a pit near the silos. MFA is meeting with Westmar Consultant tomorrow to obtain additional information on this discharge. The discharge from the pit has not been considered in the remainder of this letter.

Basin 1, which currently drains to Outfall 4, is approximately 0.24 acres, all of which is impervious. This area includes the paved areas south of the rail load out building, east of the silos, and west of the rail car movers (see Figure C1). Basin 1 also includes stormwater that drains off the hopper rail cars during their movement through the building and that is collected in catch basins inside the rail load-out building and trench drains at

both ends of the rail load-out building. John Hone has indicated that he will likely seal the catch basin inside the rail load-out building. Cement and alumina are potential pollutants to storm water runoff from Basin 1. Storm water drains through catch basins or trench drains to a pipe network and vault before discharging from Outfall 4. The vault, measuring 5.2 feet long by 3.7 feet wide by 6 feet deep, acts as a settling basin before stormwater is discharged from Outfall 4 to the Willamette River.

Basin 2, which includes the drainage area from the concrete dock, is approximately 0.34 acres, all of which is impervious. This area consists of the piling-supported concrete dock, which includes the shop, administration building, and the pneumatic unloading system (see Figure C1). Most storm water runoff from this area currently discharges directly to the Willamette River by sheet flow on the west side of the dock.

A hydrologic model was created using HydroCAD 6.10 to determine flow rates to the proposed pH adjustment system. Peak flow rates and total stormwater volume were calculated for each basin using a 5-year Type IA 24-hour storm event. Peak flow rates and total volume from the area draining to Outfall 4 are 0.12 cubic feet per second (cfs) and 1,699 cubic feet respectively. Peak flow rates and total volume from the concrete dock are 0.23 cfs and 3,311 cubic feet respectively. The combined peak flow from both basins flowing to the pH control system would be 0.35 cfs with a total volume of 5,010 cubic feet.

### **Concrete Dock Stormwater Conveyance**

MFA has explored three conceptual designs for collecting stormwater from the concrete dock. The three designs include: attaching a gutter to the west edge of the dock; installing a trench drain; or core drilling holes through the dock and collecting stormwater in a pipe below the dock. Stormwater would be routed along the north edge the concrete dock to a point just upstream of the existing vault and connect with the existing stormline (See Figure C1).

MFA worked with Westmar Consultants to explore the structural feasibility of the three design options, and has also discussed the design options with John Hone and Glenn Dollar. Westmar Consultants has concerns regarding concrete cutting or core drilling on the dock. Westmar feels this could potentially negatively impact the structural integrity of the dock due to a significant support beam in that location. Based on discussions with Westmar, the best option would be to attach a gutter system along the edge of the dock. This option would not interfere with structural beams under the dock. However, installation of the gutter could potentially conflict with electrical conduit and a lightning ground cable located on the outside edge of the dock. MFA is exploring options to install



the gutter without having to move the conduit or cable. MFA discussed with Mr. Hone and Mr. Dollar the need to have an experienced contractor look at the dock to determine the feasibility of installing the gutter system. They indicated that they have a number of contractors that have working relationships with Ash Grove and that may be interested in providing a bid for the gutter installation. We told Mr. Hone and Mr. Dollar to go ahead and make the contacts and that MFA would be available to meet with the contractors at the site. Alternately, MFA could coordinate directly with the contractors to arrange site visits. Once MFA receives input from the contractors, the conveyance system design can be finalized.

A cost estimate for collecting stormwater from the dock and conveying it to the vault has not been completed. MFA can complete the estimate once the final design has been completed.

### **Treatment System**

Once the North Terminal begins operating, it is assumed that loading and unloading operations will produce at least occasional releases of cement dust to the ground surface. The dust could increase the pH of the stormwater runoff and could be a potential source of solids and turbidity in the stormwater. Because the facility is not yet operating, representative stormwater quality data such as pH, total suspended solids, turbidity, and hardness are not available. MFA discussed the anticipated solids loading in stormwater runoff with Mr. Dollar and Mr. Hone during the site walk on June 27, 2006. Mr. Hone's observations at the South Terminal are that the stormwater flowing from the truck load-out building and silos does not have significant amounts of sediment. Based on this input, only a pH treatment system is being designed at this time. No solids removal system, other than the existing vault, is proposed. This approach matches Ash Grove's expressed desire to be proactive in installing a treatment system, but not to spend a substantial amount of money before actual sampling data indicates that a problem exists.

The proposed pH adjustment system would utilize the pHat (pH Automated Treatment) Box mini system manufactured by WaterTectonics, Inc. (see attached schematic). The pHat Box mini incorporates an automated data control unit and influent and effluent pH monitoring probes to determine pH levels and to adjust as needed. The unit adjusts pH by diffusing carbon dioxide (CO<sub>2</sub>) into the stormwater based on readings from the probes. An in-line static mixer is utilized to diffuse the CO<sub>2</sub> into the stormwater. The diffusion of CO<sub>2</sub> into water creates carbonic acid, which reduces the pH of the water. The system includes the data monitoring unit, a six month data logger, digital pH monitoring probes, mixing unit, CO<sub>2</sub> and electrical connections, fittings and a primary specialized injection quill plus

a future injection quill if additional CO<sub>2</sub> is needed in the future. The CO<sub>2</sub> tanks may be rented or purchased directly. The CO<sub>2</sub> tanks and control unit would be permanently installed in the garage and the tanks would be refilled on an as needed basis. Hydraulic modeling determined that the existing vault has a detention time of approximately 10 minutes for the 5-year storm. Based on this detention time, WaterTectonics recommends installation of an additional 50 feet of 4 inch pipe inside the perimeter of the vault to allow for proper mixing. The 4 inch pipe will reduce the detention time but greatly add to the contact and mixing of the CO<sub>2</sub> and the influent stormwater. If stormwater from the site contains a lot of suspended concrete dust, then this piping may become clogged and compromise the effectiveness of the pH treatment system. If this happens, additional solids removal options may be required. A solids removal treatment system could be incorporated into the catch basins or a manhole upstream of vault. Alternatively, a second vault, possibly with filters, could be installed to capture solids from stormwater before it enters the pH treatment system. As discussed above, no solids removal is assumed to be necessary at this point.

The equipment and installation is estimated by WaterTectonics to cost approximately \$20,300. Installation includes mounting of the pHat Box mini, connection of the CO<sub>2</sub> lines to the tank, and setting the probes. Installation would take approximately one day. Please note that Mr. Hone asked WaterTectonics to prepare a cost estimate to install a CO<sub>2</sub> system at the existing truck wash facility. WaterTectonics has determined that the cost to retrofit the truck wash facility will be \$18,572. At this time, it is assumed that two separate pH adjustment systems are necessary. MFA understands that the water from the two different areas (truck wash process wastewater and north terminal stormwater) are covered under two different permits, and can not be mixed.

Equipment and work not included in the price includes supplying a 120 VAC – 20 amp connection in the garage (to power the data control unit and system), supplying a conduit between the garage and the vault (to connect the CO<sub>2</sub> lines with the tanks and to connect the pH probes with the data control unit), and installing piping in the vault (to increase the contact time). These costs will be estimated as part of the dock conveyance system estimate, but are expected to be less than \$5,000.

Yearly maintenance costs for the pH adjustment system are expected to be less than \$1000. Tank rental is estimated at \$45 per month for a total yearly cost of \$540. Yearly CO<sub>2</sub> costs will range from \$120 to 360 per year based on mean yearly rainfall of 37.0 inches and a WaterTectonics estimate of \$0.10 per 1000 gallons of water treated.

Please call to further discuss the status of our work. We will be meeting with Westmar tomorrow at 10:30 Pacific Time, but in the office for the rest of the day. Alistaire will be

Bob Vantuyl  
June 29, 2006  
Page 5

Project No. 0168.01.02

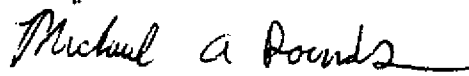
out of the office next week (July 3 through July 7), but Michael will be available to work on the Ash Grove stormwater system project and answer any questions you may have.

Sincerely,

Maul Foster & Alongi, Inc.



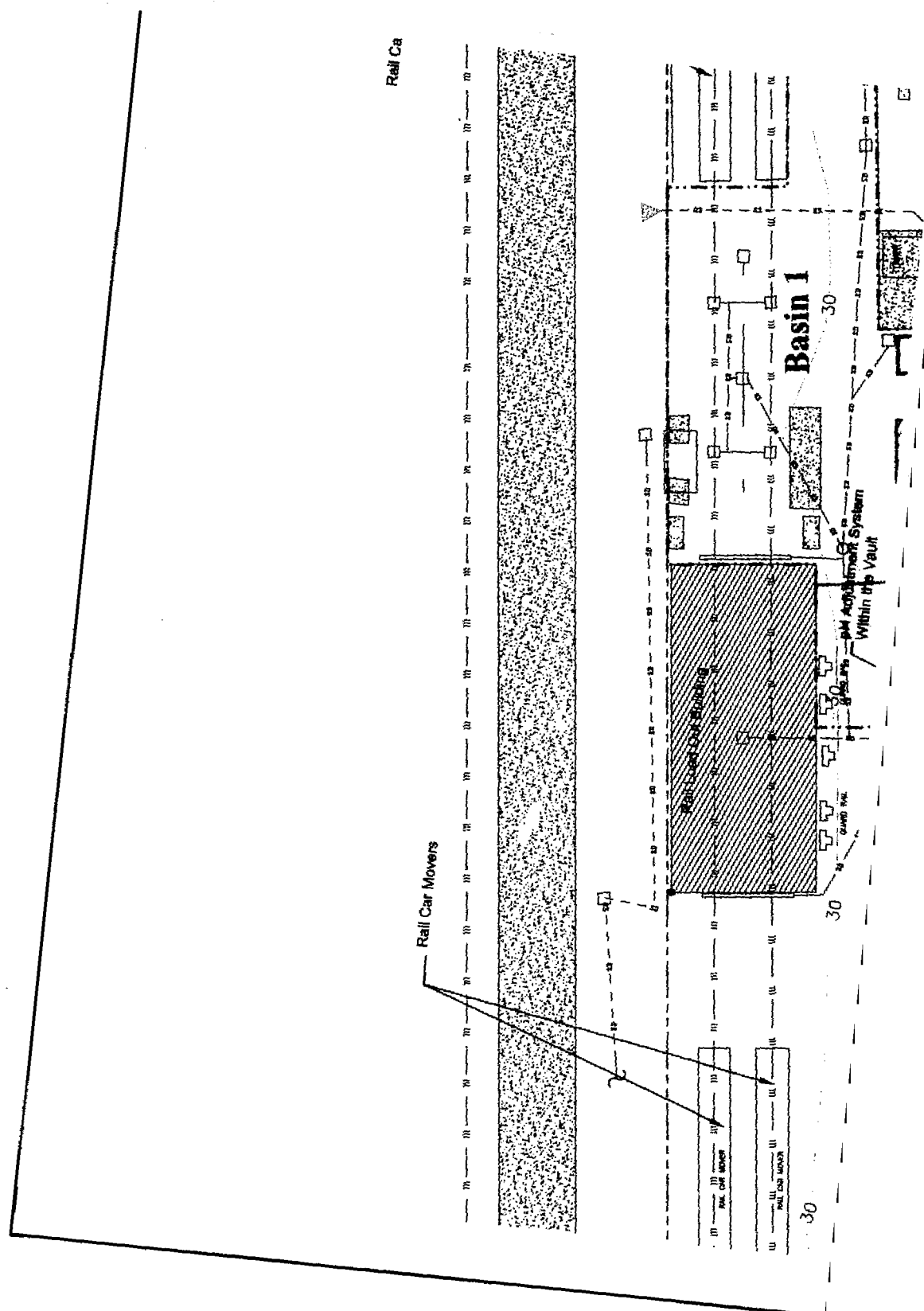
Alistaire Clary, P.E.  
Senior Engineer

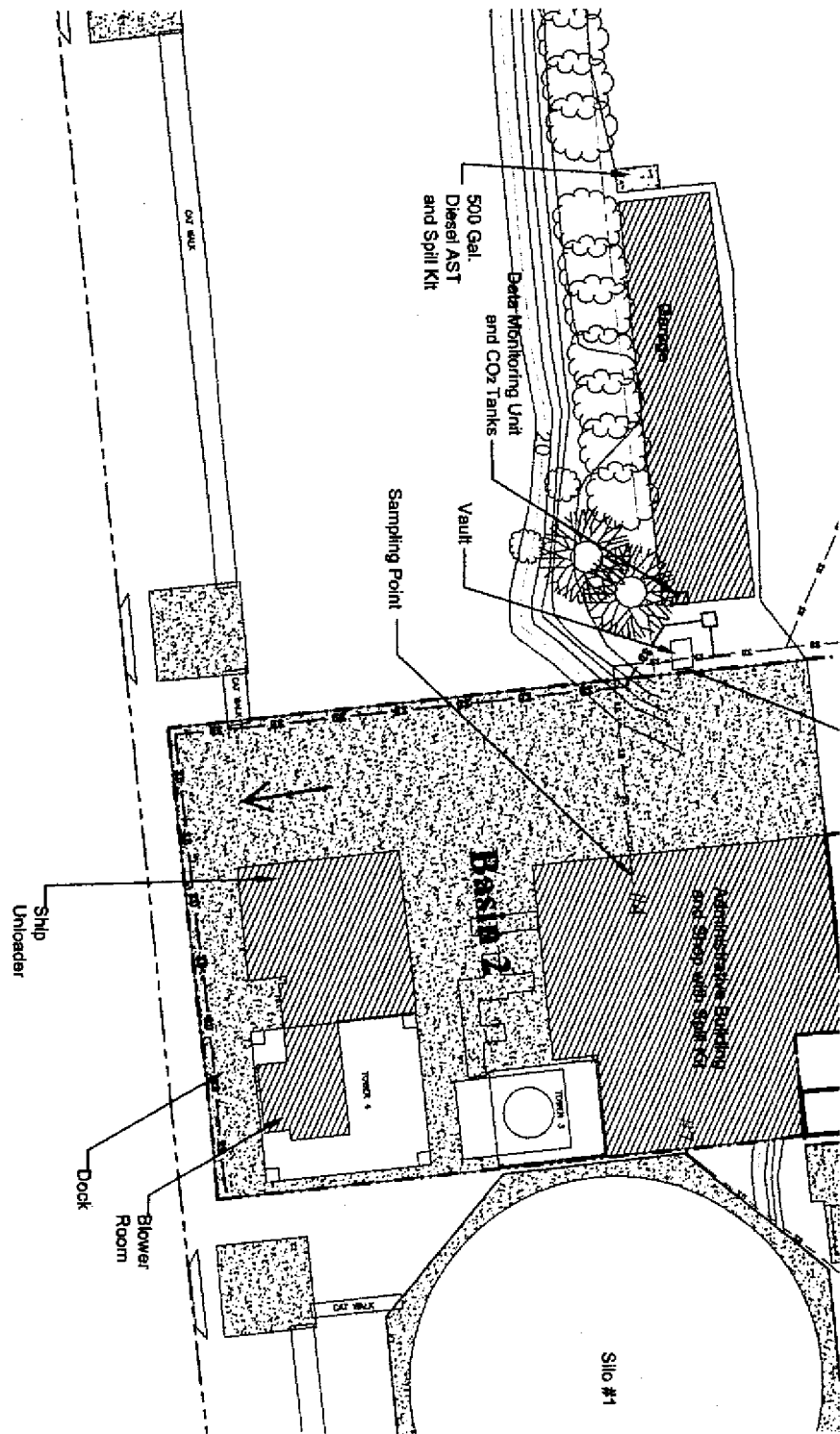


Michael Rounds E.I.T.  
Staff Engineer

Attachments: Figure C1  
pHat Box Schematic Drawing

cc: Glenn Dollar  
John Hone





**C1**

### Conceptual Stormwater Quality Design

**Ash Grove Cement Co.  
Portland, Oregon  
Draft**

**Preliminary Plan  
Not For Construction  
Date of Issue:**

[illegible]

**Legend:**

**Legend:**  
- Property Boundary

- Fence

### **- Railroad Tracks**

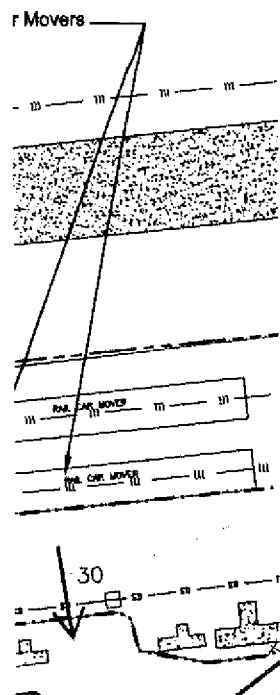
## #2 Outfall Location and Designation

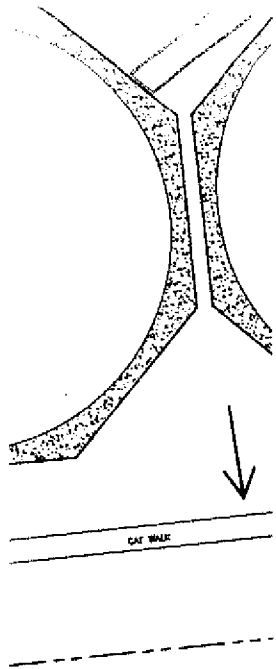
Rock Collector  
(buried)

– Ash Grove Stormwater Line  
(configuration estimated)

- Stormwater Line  
(not used by Ash Grove)

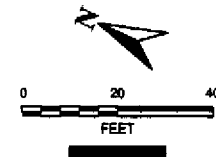
– ~~Proposed~~ Stormwater Line





- Basin Boundary
- Existing Catch Basin
- Proposed Catch Basin
- Existing Manhole
- Direction of Surface Water Flow
- Asphalt Pavement
- ▨ Concrete
- ▩ Buildings

Note:  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

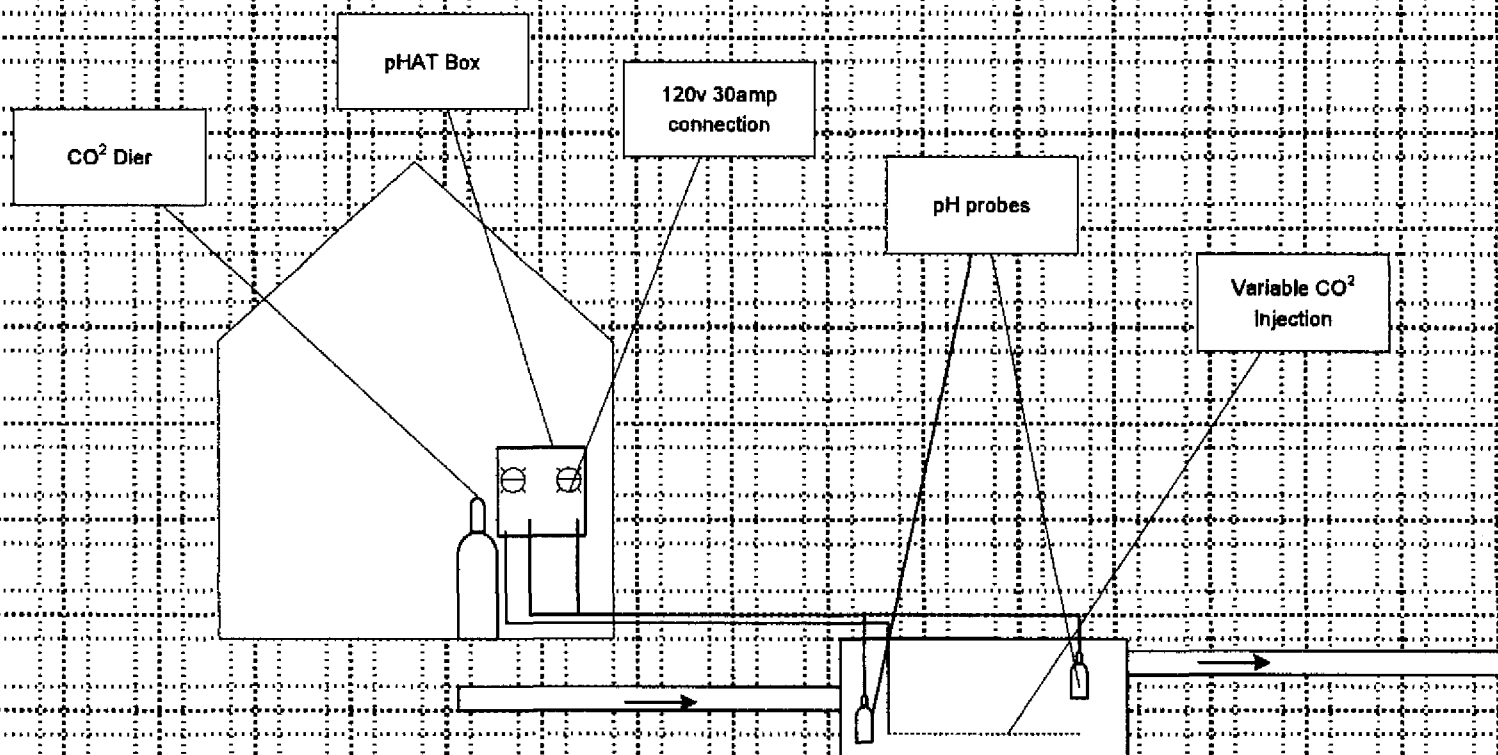


Note: Bar is one inch on original drawing. If not  
one inch on this sheet, adjust scale accordingly.

MAUL  
FOSTER  
ALONGI INC.  
A CORPORATION OF THE STATE OF CALIFORNIA  
Surveyors 511 - Registered 1981 - License 10549-002

# Maul Foster & Alongi

pHAT Box  
Automated pH Neutralization



Drawing not to scale

**WATERTECTONICS**

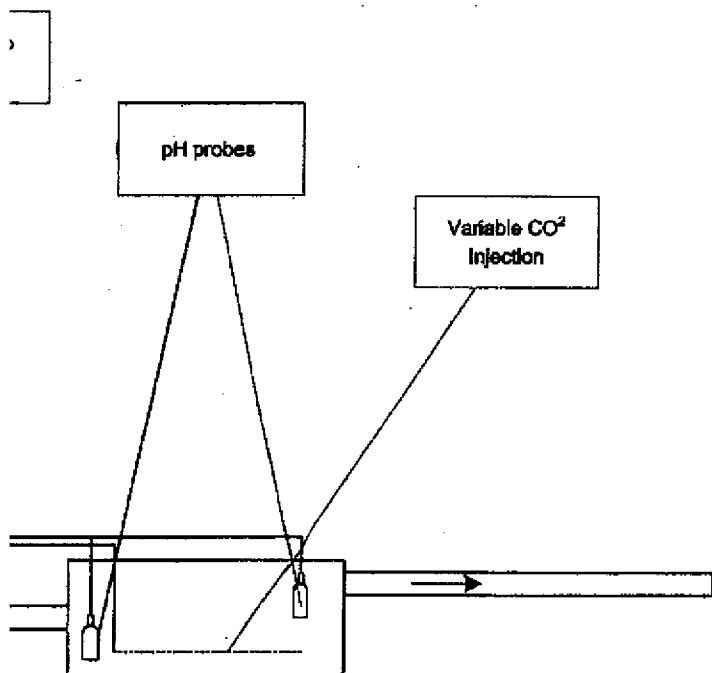
pH automated  
adjustment system


Date: 5/22/06

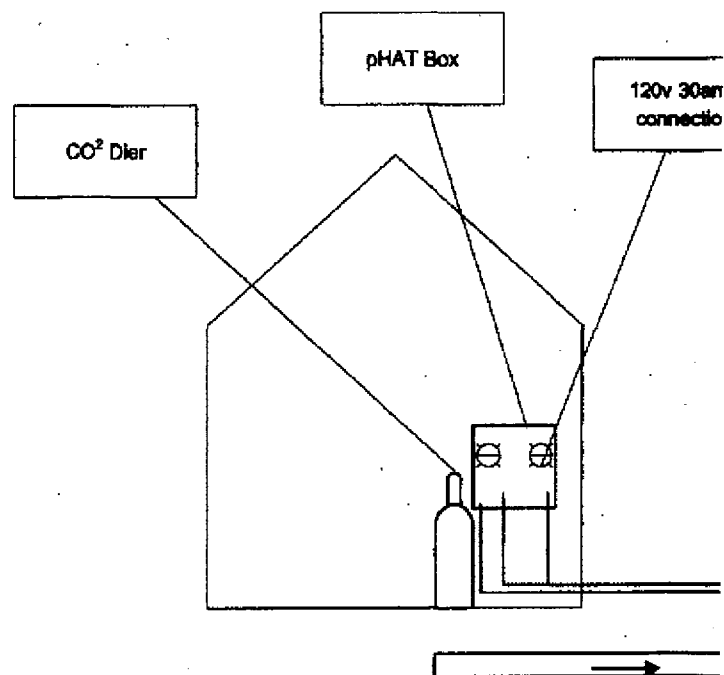
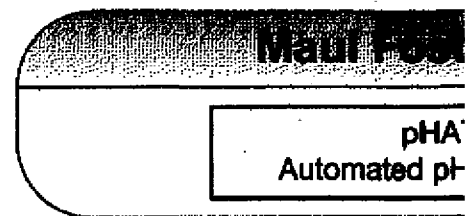


**er & Along**

**Box**  
**Neutralization**



 <b>WATERTECTONICS</b>	
pH automated adjustment system	Date: 5/22/06



Drawing not to scale



ENVIRONMENTAL & ENGINEERING CONSULTANTS

7223 NE Hazel Dell Avenue, Suite B | Vancouver, Washington 98665 | Phone 360.694.2691 | Fax 360.906.1958 | [www.MFAinc.org](http://www.MFAinc.org)

August 21, 2006

Project No. 0168.01.02

Bob Vantuyl  
Ash Grove Cement  
3737 North Port Center Way  
Portland, OR

Re: Status of Ash Grove Portland North Terminal stormwater system upgrades design

Dear Mr. Vantuyl:

Maul Foster and Alongi, Inc. (MFA) has prepared this letter to update the status of the stormwater treatment system upgrade design for the Ash Grove Cement North Terminal located at 3737 North Port Center Way, Portland, Oregon.

### **Concrete Dock Stormwater Conveyance**

MFA met with Tom McLaughlin from Greenberry Industrial at the North Terminal on July 27, 2006, to discuss the conceptual designs and obtain a cost estimate for the work. As a result of this meeting, MFA has made changes to the original design. These changes were made due to constructability, cost, and safety issues that arose out of the July 27 site meeting. The updated design includes collection of stormwater from the concrete dock via scuppers placed along the west edge of the dock. Note that the number of scuppers will depend on the footprint of the new crane base being designed by Westmar. Stormwater will be routed through a pipe placed on the underside of the 2-foot-wide wooden bumper along the west end of the dock and then routed along the south edge of the concrete dock to the airlift pit. The pipe will discharge to the airlift pit through a core-drilled hole in the pit wall. The hole will be placed at an elevation above the high water line and will be grouted. Stormwater from the pit will be pumped to a nearby catch basin located east of the administration building (See Figure C1). This option will not interfere with structural beams under the dock. A cost estimate for collecting stormwater from the dock and conveying it to the airlift pit has been prepared by Greenberry Industrial. Greenberry estimates that the work will cost approximately \$36,000.

### **Airlift Pit Pump**

An automatic pump with a float and alarm will be installed in the airlift pit sump to keep water below the intake. Based on measurements provided by Glenn Dollar of Ash Grove Cement, the airlift intake is 12 inches above the bottom of the pit. The pump will be set to turn on when the water level is 8.5 inches above the floor of the pit. This will allow approximately 410 cubic feet of storage in the pit before the pump turns on. A pump flow rate of 135 gallons per minute (gpm) will keep the water surface below the airlift intake during a 100-year storm event while not cycling on and off during lower flows. It would also be possible to use two pumps with a total combined flow of 135 gpm, but with only one pump turning on at a lower float elevation. The total dynamic head required to pump stormwater from the pit to the catch basin was calculated for three different pipe sizes. The total dynamic head requirements for 3-, 4- and 6-inch flexible discharge hose with a smooth bore and a flow rate of 135 gpm are estimated to be 27.5 feet, 19.5 feet, and 17 feet respectively. The pump can be sized based on the diameter of discharge pipe Ash Grove chooses to use. If Ash Grove desires, MFA could provide assistance with selection of a specific pump(s) or with reviewing Ash Grove's pump(s) selection.

### **Treatment System**

WaterTectonics originally recommended installation of 50 feet of 4 inch pipe inside the perimeter of the existing vault to allow for greater contact time and better mixing of the carbonic acid. The pipe will be placed under the static water level in the vault. Based on excessive head loss and the potential for water to back up into the catch basins, MFA has changed the design to include 6" flexible hose with camlock fittings. The camlock fittings will allow better access for pipe cleaning. MFA has discussed the increase in pipe size with WaterTectonics. WaterTectonics has indicated that the cost impact would be minor.

As noted in MFA's status letter dated June 29, 2006, solids removal is not assumed to be necessary at this point. However, if stormwater from the site contains a lot of suspended concrete dust, then this piping may become clogged and compromise the effectiveness of the pH treatment system. If this happens, additional solids removal options may be required. A solids removal treatment system could be incorporated into the catch basins or a manhole upstream of vault. Alternatively, a second vault, possibly with filters, could be installed to capture solids from stormwater before it enters the pH treatment system.

Bob Vantuyt  
August 21, 2006  
Page 3

Project No. 0168.01.02

## Schedule

The pH system could be installed at any time. The lead time for WaterTectonics to install their system is generally 4 to 6 weeks. Greenberry will need to install a conduit between the garage and the existing vault before the pH system can be installed. In addition 120 VAC – 20 amp power will need to be supplied to the south wall of the garage. The dock work by Greenberry should be installed after the construction of the new crane base on the dock.

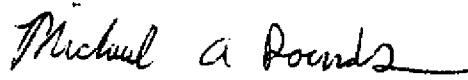
Please call if you have any questions. Otherwise, we look forward to talking with you during your trip to Portland on August 24.

Sincerely,

Maul Foster & Alongi, Inc.



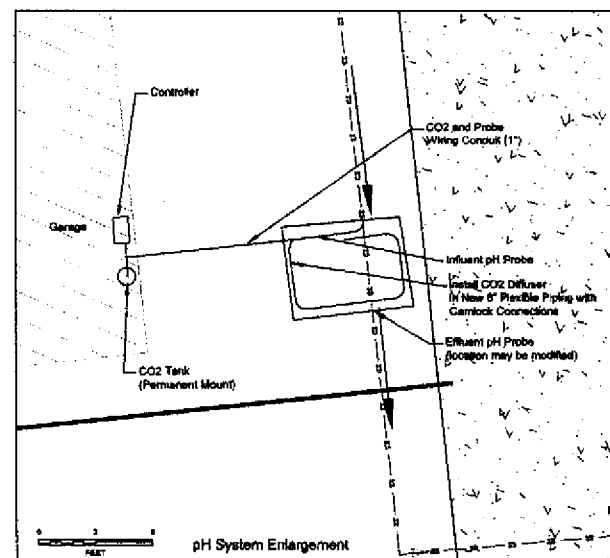
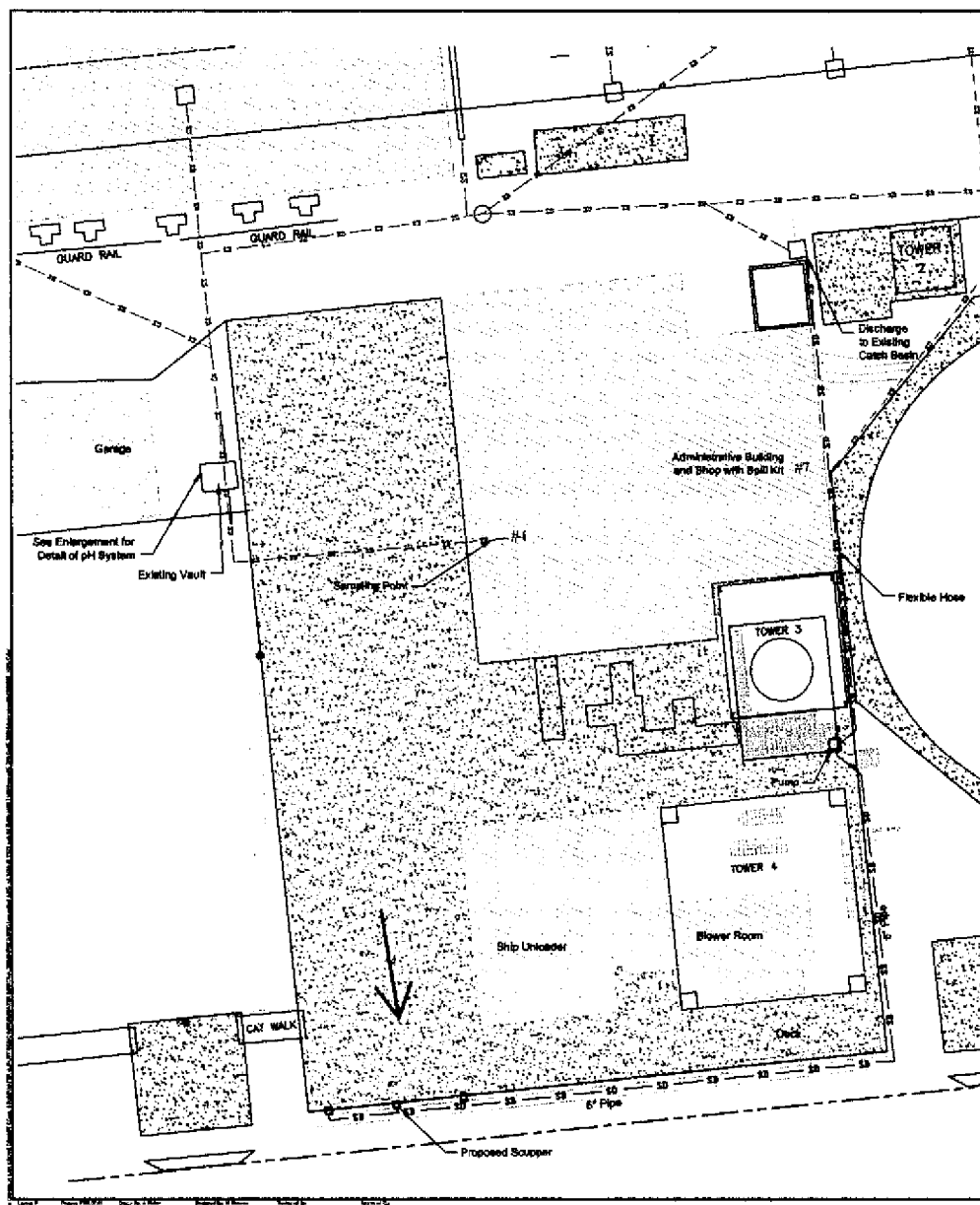
Alistaire Clary, P.E.  
Senior Engineer



Michael Rounds E.I.T.  
Staff Engineer

Attachments: Figure C1

cc: Glenn Dollar  
John Hone



C1

Conceptual Stormwater Quality Design

Ash Grove Cement Co.  
Portland, Oregon  
Draft

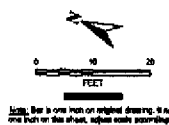
**Preliminary Plan  
Not For Construction**

Date of Issue:

REV	DATE	APPROVAL	REVISION	DATE

- Legend:**
- Property Boundary
  - - - Fence
  - #2 Outfall Location and Designation
  - Ash Grove Stormwater Line (configuration estimated)
  - Proposed Stormwater Line
  - Existing Catch Basin
  - Existing Manhole
  - Proposed Scupper
  - Direction of Surface Water Flow
  - Coarse
  - Buildings

**Note:**  
Based on Alla Land Title survey by  
Cassini/Horn Surveyors on Sept. 28,  
2005, and updated in February 2006  
and March 2006.



**MUELLER ENGINEERS**  
Portland, Oregon

October 20, 2006

## **Oil Sheen North Terminal Property**

Events surrounding the oil sheen discovered on Oct 17<sup>th</sup> 2006.

The following pictures are of the sheen.



Oct 18<sup>th</sup> 2006

An anonymous person contacted the response center on Oct 18 2006 and the Coast Guard was dispatched to investigate. I was under the tanks walking the shore line having seen this sheen trying to locate the discharge point. They approached me and we joined together in locating the discharge point. The 30" culvert pipe by the Boat house was the point where the oil was entering the Willamette River. The USCG agreed this was the location. I explained that to the best of our knowledge this pipe originated east of our property in the UPRR property. They ask me to notify the response center the next morning if the sheen was still present. It should be noted the sheen at this time has migrated south upriver under the tanks and is coating the rocks. They left to go visit the UPRR area East of our property. I later contacted the USCG office and they said the city told them this was a combined sewer outfall pipe. Hum!

Oct 19<sup>th</sup> 2006

When I arrived this morning the oil sheen was still coming out of the pipe. I called the National response Center and they contacted the USCG. The USCG evidently contacted the City of Portland who contacted me stating that this was a out fall pipe #46 and it was normal for this discharge during the rain. After a long conversation I was able to communicate that this was not outfall pipe # 46. They agreed and contacted the Environmental Field Operations Division of the UPRR who dispatched RMCAT Environmental Services. They came on site at 18:30 hours and meet Adam Piper who was Closing the Terminal. Jason Miltenberger called me and said he could see the sheen.

October 20, 2006

I meet Jason Miltenberger (RMCAT) and Norm Siler (UPRR) this morning at 08:00 and we could still see the sheen. Norm indicated this was their pipe. He explained that a few months ago a company was hired by UPRR to clean some of their drain pipes. The thought was that maybe some material was dislodged and this first rain flushed the debris out. UPRR will boom off some of the area north of our ship dock and search for the source. Norm said their will be follow up communications regarding this.

This will be updated as things proceed!

Contacts:

UPRR

Manager Environmental Field Operations: Norm Siler 503-872-1979

RMCAT

Field Supervisor

Jason Miltenberger 503-408-7404

USCG

City of Portland

Petty Officer Rettburger (sp) 503-240-9370

John McGregor (sp) 503-823-7180

Olli Durks(sp) 503-823-7993

J. John Hone

Ash Grove Cement Co.

3737 N. Port Center Way

Portland, OR. 97217

Bus:503.285.4621

Cell 503.784.3463

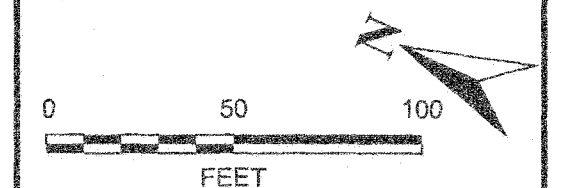




**Figure 2A**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**

- Legend:**
- Property Boundary
  - × Fence
  - ||| Railroad Tracks
  - #2 Outfall Location and Designation
  - ⬢ Rock Collector (buried)
  - Stormwater Line (not used by Ash Grove)
  - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Asphalt Pavement
  - Concrete
  - Buildings



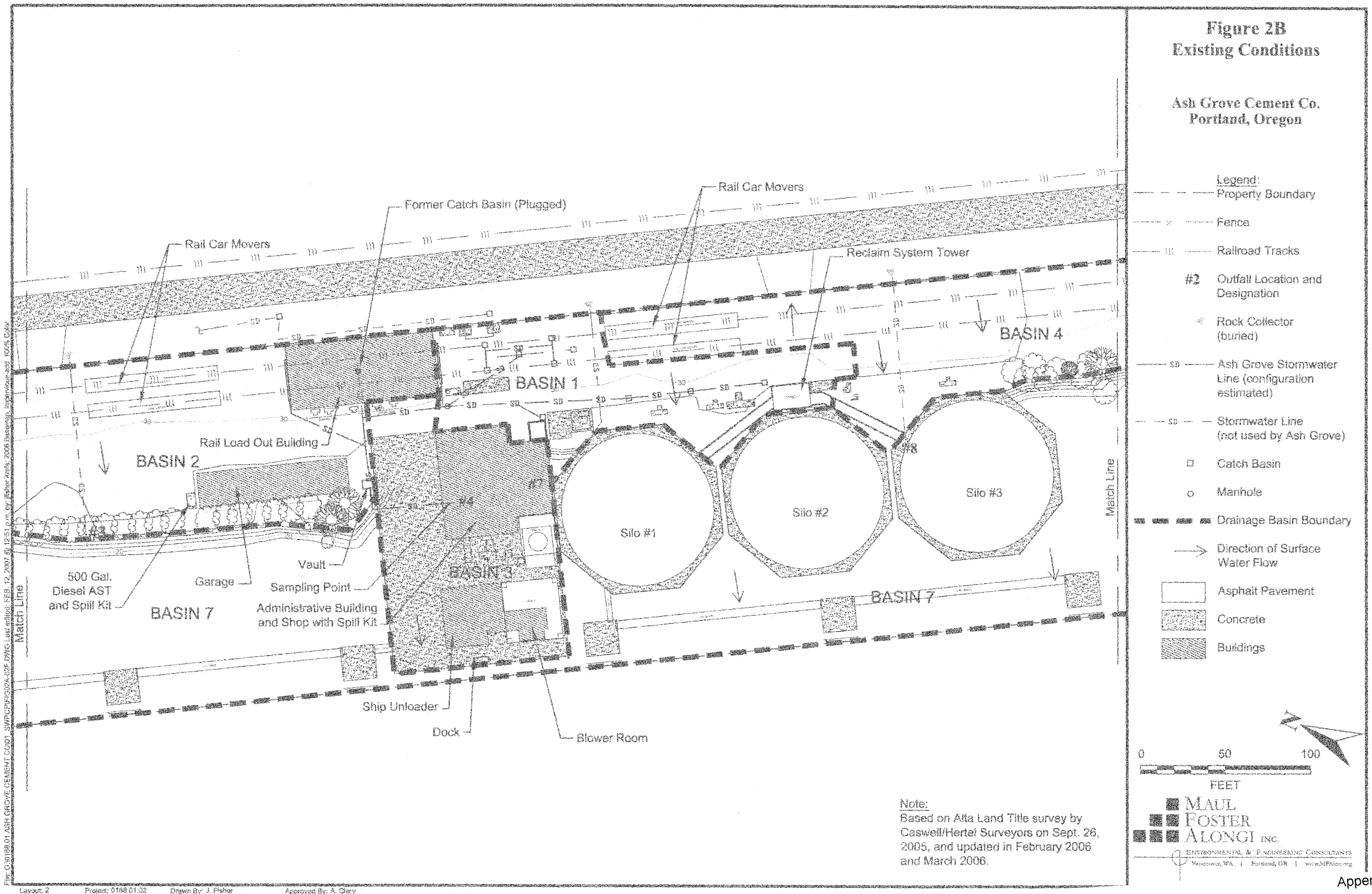
**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

**MAUL  
FOSTER  
ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAinc.org

File: G:\0168.01 ASH GROVE CEMENT CO.01 SIWPOFIG02A-02F.DWG Last edited: MAY 03, 2006 @ 1:51 p.m. By: J. Fisher Xrefs: 2006 Basemap, Impervious-aud 100% Color

**Figure 2B  
Existing Conditions**

**Ash Grove Cement Co.  
Portland, Oregon**



**Figure 2C**  
**Existing Conditions**

Ash Grove Cement Co.  
Portland, Oregon

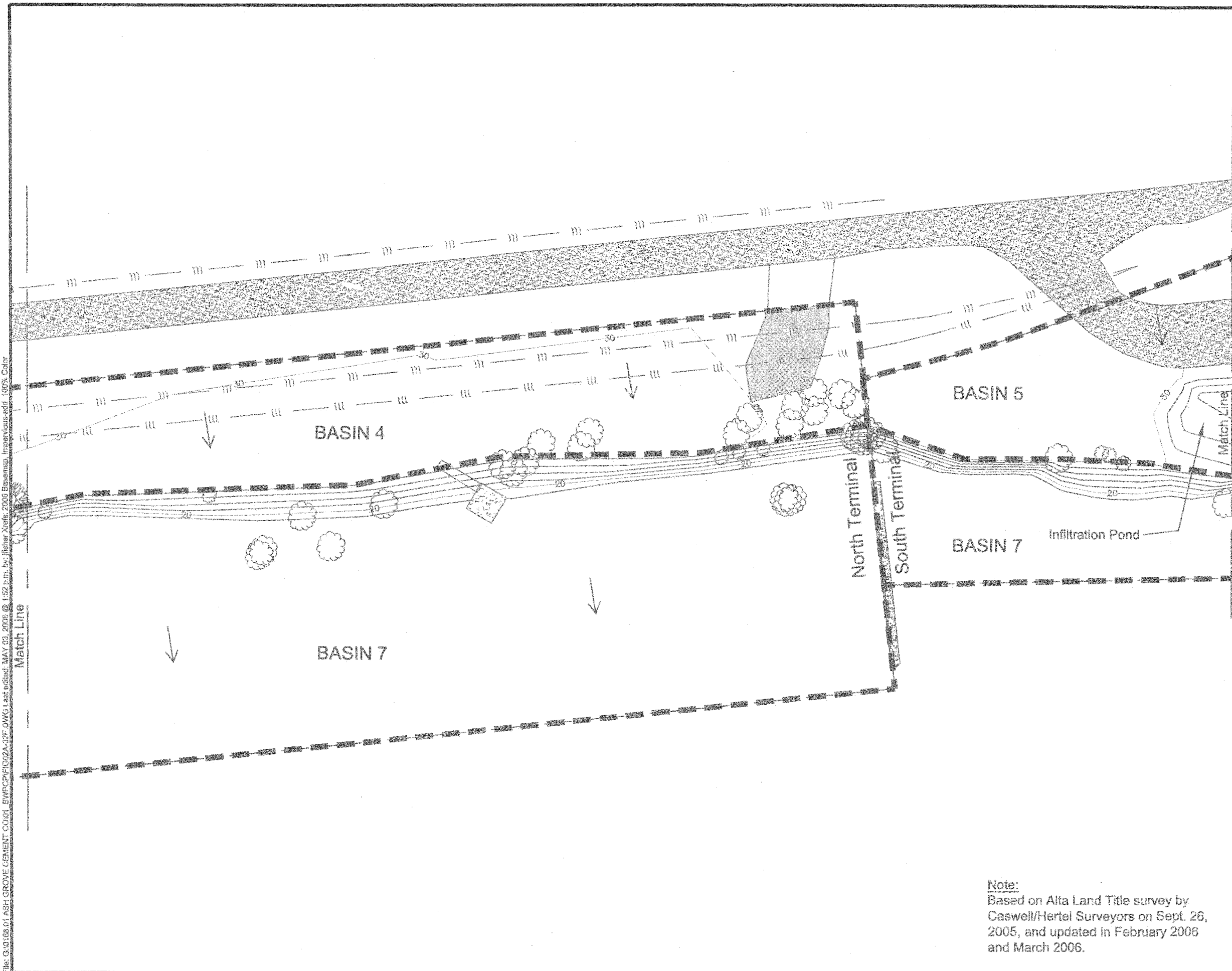
- Legend:**
- Property Boundary
  - × Fence
  - ||| Railroad Tracks
  - - - - - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete

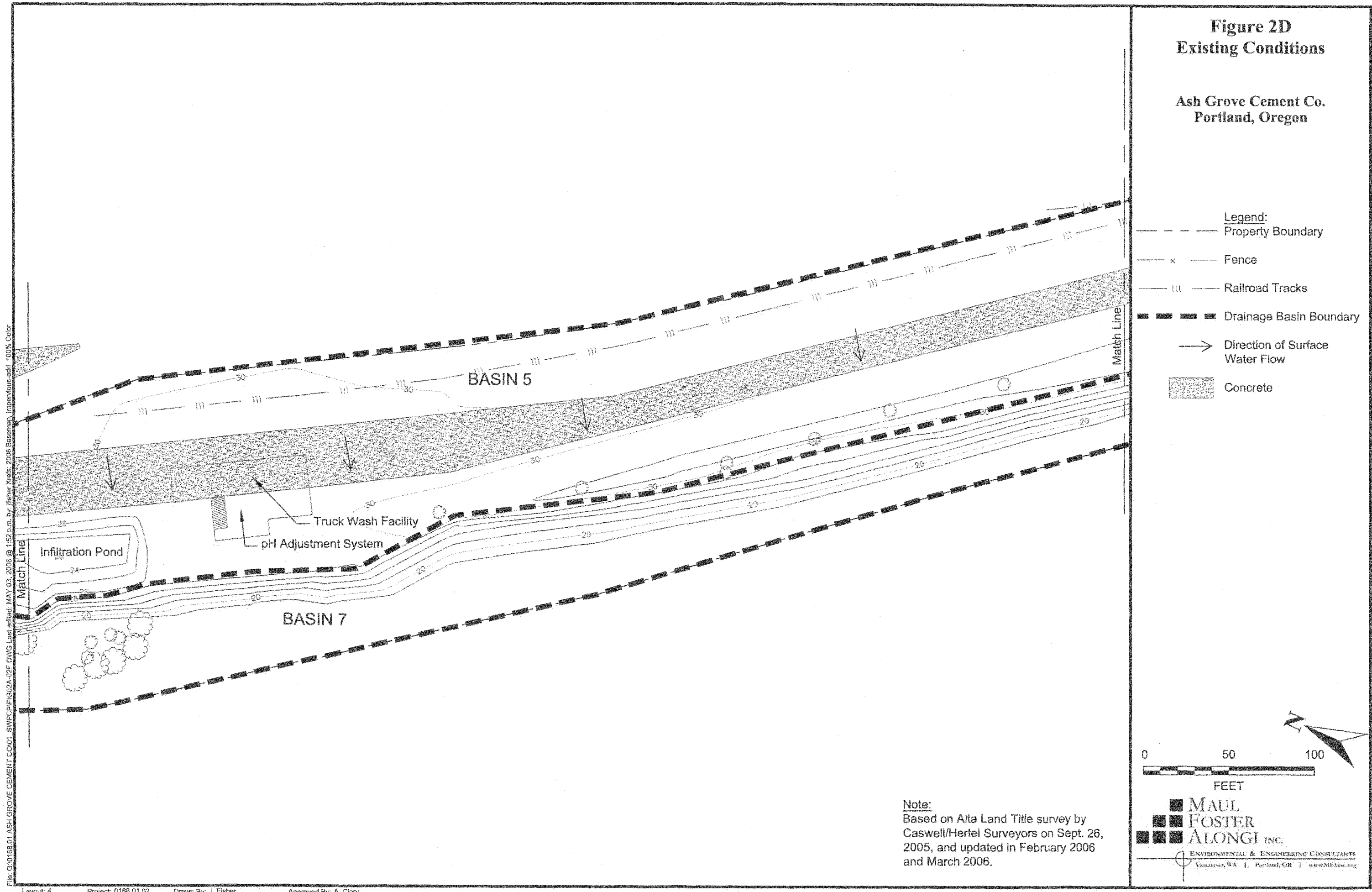
0 50 100  
FEET

**MAUL  
FOSTER  
ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | www.MFAinc.org

**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

File: G:\108.01 ASH GROVE CEMENT CO\01 SWPC\FIG2C-02F.DWG Last edited: MAY 03, 2006 @ 1:52 p.m. by: J. Fisher Xref: 2006 Basemap, Improvements add 100% Color





File: G:\0168\01 ASH GROVE CEMENT COO1 SWPCP\FIG2D-02E.DWG Last edited: MAY 03, 2006 @ 1:52 p.m. by: J. Fisher Xrefs: 2006 Baseplan, Impervious addl 100% Color



**Figure 2E**  
**Existing Conditions**

**Ash Grove Cement Co.**  
**Portland, Oregon**

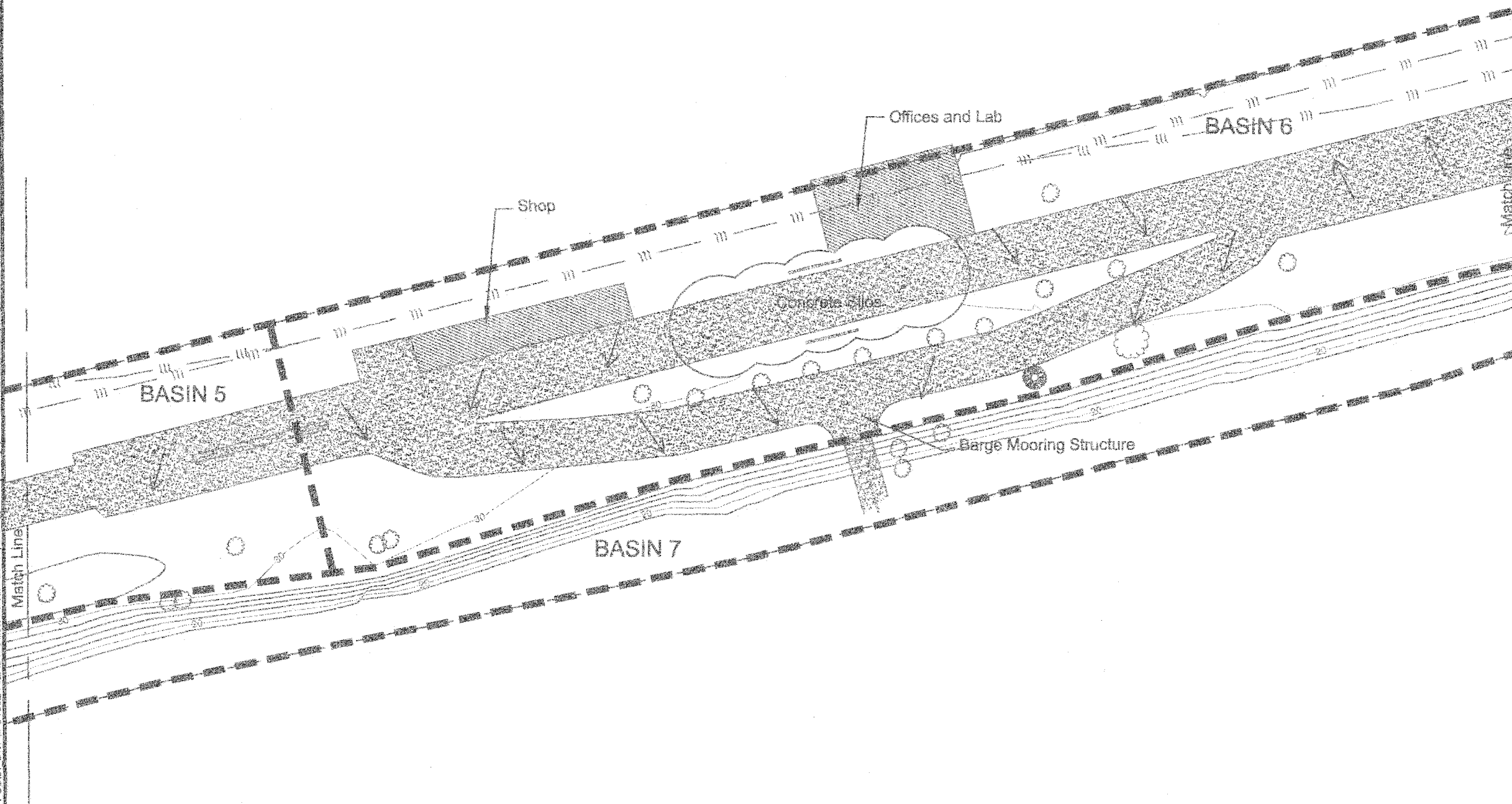
- Legend:**
- Property Boundary
  - x — Fence
  - ||| — Railroad Tracks
  - - - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete
  - Buildings

0 50 100  
FEET

**MAUL**  
**FOSTER**  
**ALONGI INC.**  
Environmental & Engineering Consultants  
Tacoma, WA | Portland, OR | www.mfae.com

**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

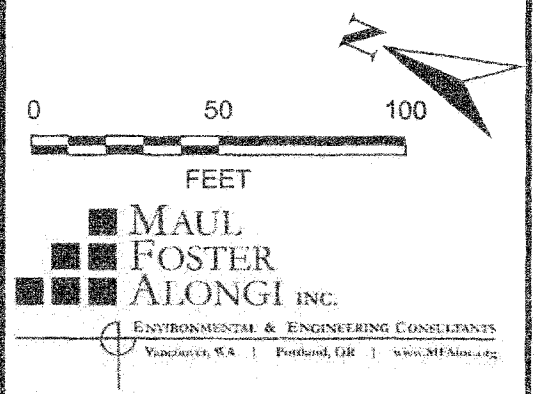
File: G:\0180\01 ASH GROVE CEMENT CO\01 SWP\CFR\G02A-021.DWG Last edited: FEB 09, 2007 @ 12:07 p.m. by: Fisher Xref: 2006 Revision: in progress and 100% Color



**Figure 2F  
Existing Conditions**

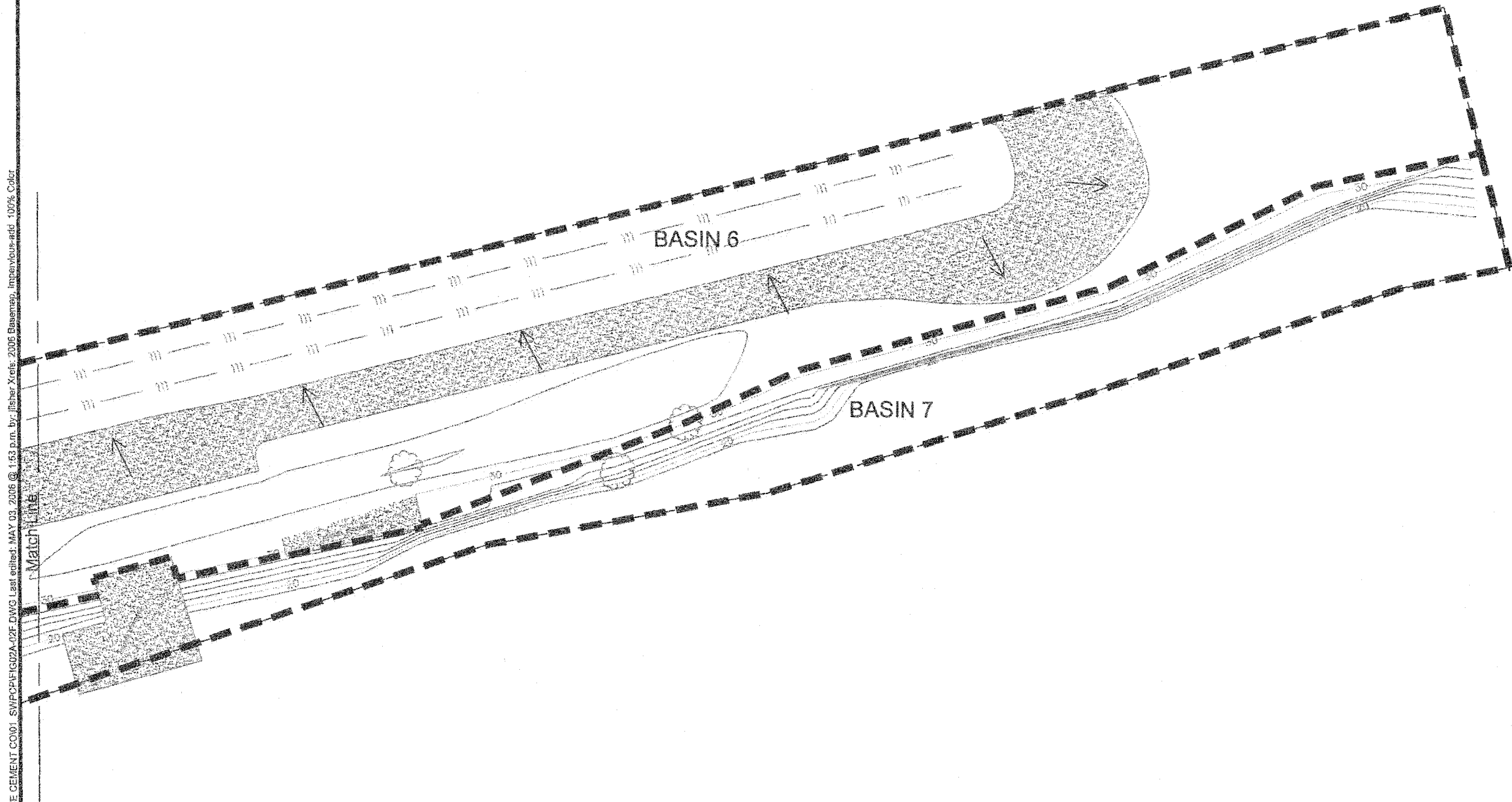
**Ash Grove Cement Co.  
Portland, Oregon**

- Legend:**
- Property Boundary
  - x — Fence
  - ||| — Railroad Tracks
  - - - Drainage Basin Boundary
  - Direction of Surface Water Flow
  - Concrete

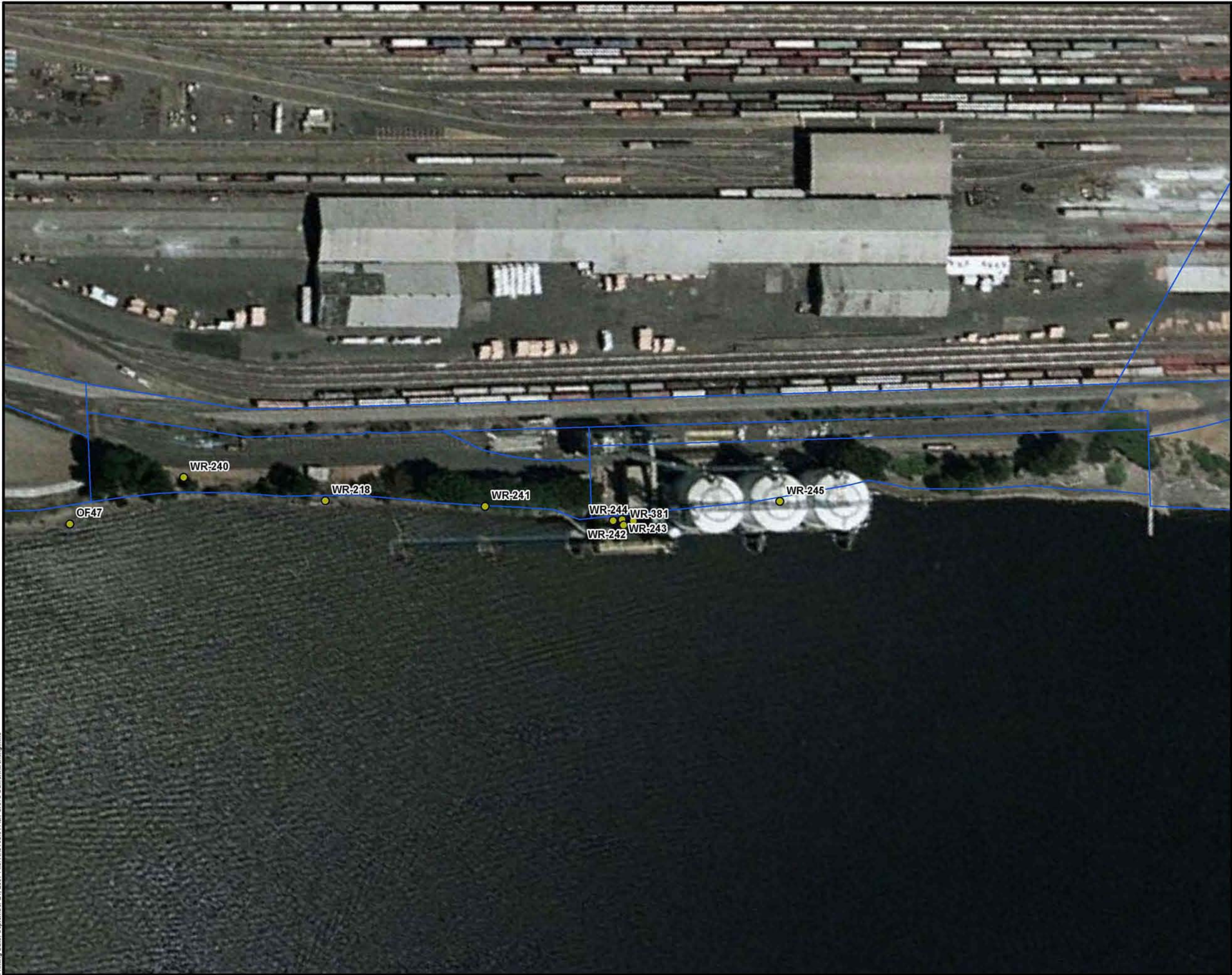


**Note:**  
Based on Alta Land Title survey by  
Caswell/Hertel Surveyors on Sept. 26,  
2005, and updated in February 2006  
and March 2006.

File: G:\0168.01 ASH GROVE CEMENT CO\01\_SINPRO\FIG2F.DWG Last edited: MAY 03, 2006 @ 1:53 p.m. by: J. Fisher Xref: 2005 Base map, Impervious-add, 100% Color









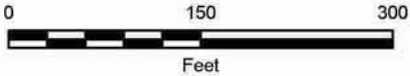
**Figure  
Outfalls**

Ash Grove  
Portland, Oregon

**DRAFT**

**Legend**

-  taxlots
-  City of Portland Outfalls\_6\_05\_project



**MAUL  
FOSTER  
ALONGI INC.**  
ENVIRONMENTAL & ENGINEERING CONSULTANTS  
Vancouver, WA | Portland, OR | [www.MFAinc.org](http://www.MFAinc.org)

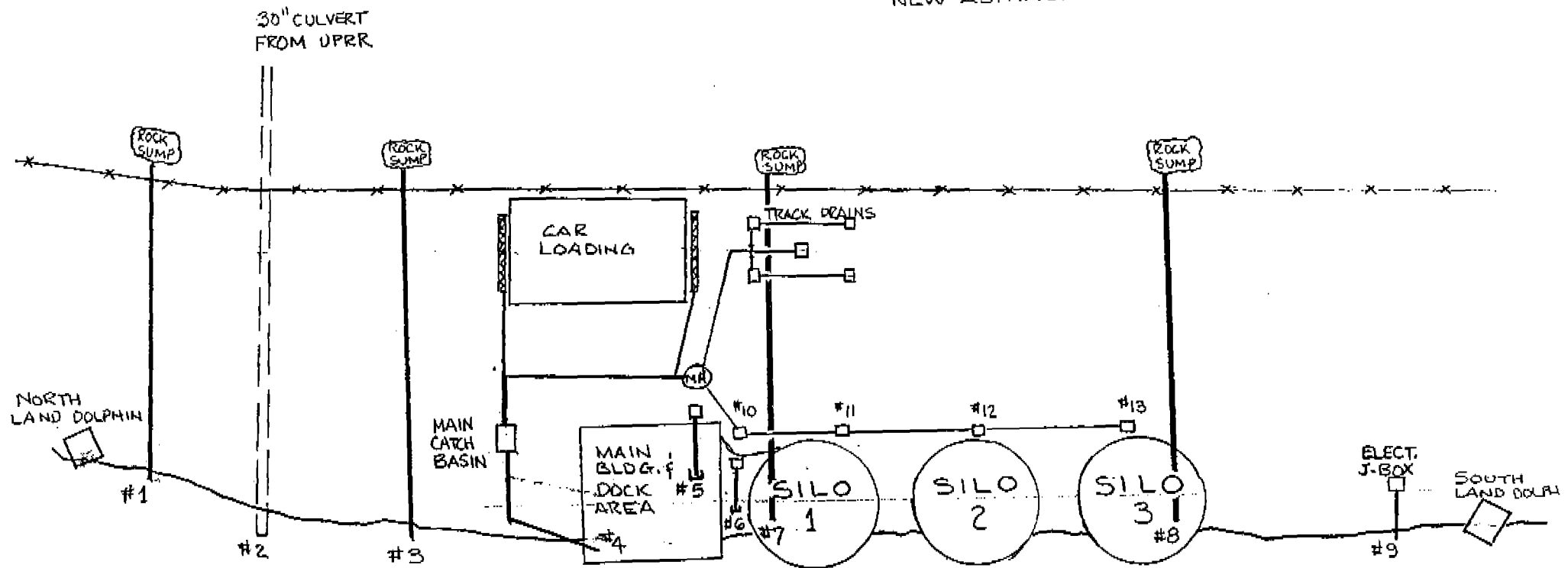
Printing Date: September 24, 2007 File: X:\0108\01 Ash Grove Cement\working.mxd

Project: Produced By: Approved By:



# NOTES:

- 1) #5 & #6 DRAINS CAPPED & PLUGGED NOV. 2000
- 2) #10, #11, #12, #13 ADDED TO CATCH RUN OFF FROM NEW ASPHALTED AREA. NOV. 2000



REVISED 12/4/00 BY D. KANNARD  
RE DRAWN 9/28/05 BY B. PALMER

## OUTFALL DRAIN PLAN